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Taiwanese University Students with Hearing Impairment: A Case Study of their Experiences and of
Factors Contributing to Persistence in their Studies

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Taiwanese University Students with Hearing Impairment: A Case Study of their
Experiences and of Factors Contributing to Persistence in their Studies

by

Shu-Fen Chang Lee

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Taiwanese University Students with Hearing Impairment: A Case Study of their Experiences and of Factors Contributing to Persistence in their Studies

Abstract

This study examines the experiences of students with hearing impairment (HI) in a post-secondary institution in Taiwan. The special education law and regulations passed in Taiwan in 1984 concerning the education of students with disabilities led to an increase in the number of students with HI enrolled in post-secondary institutions. Although students with hearing impairment now have greater opportunities to enrol in colleges and universities, and are provided with support services and counselling, they continue to have problems in their academic and social campus life and often eventually drop out (Hsiao, Hsu & Wu, 2001). However, despite their difficulties, some students with hearing impairment do persist in their studies and graduate. At this point, there is no information on the reasons for these students' success. The purpose of this study is to explore their learning experiences, how they have overcome obstacles, and the factors that led to their persistence in their studies.

This study is one of the first qualitative studies to examine the post-secondary experiences of Taiwanese post-secondary students who have hearing impairment. The conceptual model underpinning this study was a revised version of Tinto's 1993 and 1997 Student Integration Model (SIM).

The participants were seven students with hearing impairment who were in their third and fourth year of university, their learning partners, four professors, and two personnel for the Centre for Counselling Services. Data collection procedures included individual interviews, focus group interviews, observations, and a self-reflective journal. The interviews were the most important source of data. Profiles of the participants with HI were developed and a cross case analysis was done.

The findings identified three factors contributing to persistence: individual characteristics, academic integration and the support services. In terms of academic integration, personal effort in learning was the most important factor, and in terms of the support services, the provision of the learning partners contributed to persistence. Both of these elements helped the students earn higher grades and contributed to persistence. The goal-orientation to graduate and obtain a well-paying, stable job with good benefits was also found to play a vital role in the students' persistence. It also became clear that the students with HI in this study were not well integrated into the social life of the university, and so Tinto's identification of social integration as a factor in persistence was not supported by this study. Therefore, only partial support for Tinto's SIM was found.

TABLE OF CONTENTS

CHAPTER1: INTRODUCTION.....	1
Education in Taiwan.....	5
Purpose of the study.....	6
 CHAPTER 2:	
REVIEW OF THE LITERATURE AND CONCEPTUAL MODEL.....	8
Review of the Literature.....	8
Tinto's Student Integration Model.....	9
Persistence or Withdrawal of Students in Four-year Institutions.....	12
Persistence or Withdrawal of Students in Two-year Community Colleges.....	16
Critique of Studies of Students in Four-Year and Two-Year Institutions..	17
Persistence of Students with Disabilities in Four-year Institutions.....	18
Persistence or Withdrawal among Students with Disabilities in Taiwan...	19
Persistence or Withdrawal among Students with Hearing Impairment.....	21
Persistence or Withdrawal of Students with Hearing Impairment in Taiwan.....	25
Criticism of Tinto's Student Integration Model.....	28
Critique of the Literature on the Withdrawal/Persistence of Students with Hearing Impairment.....	29
Support Services and Students with Hearing Impairment.....	31
Conceptual Model.....	32
Research Questions.....	35
 CHAPTER 3: METHODOLOGY.....	36
Qualitative Research.....	36
Paradigm.....	37

Case Study Method.....	38
Participants.....	39
Research Site.....	42
Access and Consent.....	42
Data Collection Procedures.....	43
Individual interviews.....	44
Observations.....	46
Focus group interview with students with HI.....	47
Self-reflective journal.....	48
Researcher's Perspective.....	48
Data Analysis.....	49
Trustworthiness.....	50
Summary.....	51
 CHAPTER 4: PROFILES.....	 52
Annie's Profile.....	52
Helen's Profile.....	70
Jenny's Profile.....	84
John's Profile.....	97
Lily's Profile.....	113
Maggie's Profile.....	127
Wendy's Profile.....	144
 CHAPTER 5: PERSPECTIVES ON STUDENTS WITH HEARING IMPAIRMENTS: LEARNING PARTNERS, PROFESSORS, AND PERSONNEL FROM CENTRE FOR COUNSELLING SERVICES.....	 159
Learning Partners.....	159
The Professors.....	168
The Personnel from the Centre for Counseling Services.....	173

Summary.....	177
CHAPTER 6: CROSS CASE ANALYSIS.....	179
Individual Characteristics.....	179
Academic Integration.....	182
Social Integration.....	188
Support Services.....	189
Goal Commitment and Institutional Commitment	190
Summary.....	192
CHAPTER 7: DISCUSSION.....	199
Conceptual Model.....	199
The Purpose of this Study.....	200
Summary of Findings.....	201
The Research Questions.....	203
Research Question 1- What were the past and present educational experiences of students with hearing impairment enrolled in post-secondary studies in Taiwan?.....	203
Pre-University Educational Experiences.....	203
Post-Secondary Educational Experiences.....	204
Research Question 2- What were the facilitators to the completion of their program?	205
Facilitators-Personal Effort	205
Facilitators-Personal Qualities.....	205
Facilitators-Learning Partners.....	206
Research Question 3- What were the barriers to the completion of their program?	207
Barriers-Communication.....	207
Barriers-Social.....	208
Barriers-Academic.....	209

Research Question 4- Why did these students persist in their studies?	
Goal Commitment.....	211
Contributions to Theory.....	212
Recommendations for Practice.....	214
Limitation of Study.....	215
Further Research.....	216
Conclusion.....	217
REFERENCES.....	219
APPENDIX A.....	230
APPENDIX B.....	232
APPENDIX C.....	236
APPENDIX D.....	239
APPENDIX E.....	242
APPENDIX F.....	265
APPENDIX G.....	272
APPENDIX H.....	273
APPENDIX I.....	274
APPENDIX J.....	282

List of Figures

Figure 1 - Model of Persistence Among Students with HI.....	34
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List of Tables

Table 1 – Participants.....	41
Table 2 - Data Collection.....	44
Table 3 – Summary of Cross Case Analysis.....	194

CHAPTER 1

INTRODUCTION

Due to legislation in Taiwan which has enabled students with disabilities to enter post-secondary institutions, greater attention has been paid in recent years to the education of these students, including those with hearing impairment (HI) (see Appendix A for the definition of terms). This thesis will examine the educational experiences of a group of students with HI at a Taiwanese university that specializes in the fine arts, to determine factors that contribute to their persistence in their studies.

This introduction will describe the impact of the Taiwanese special education legislation on post-secondary students with disabilities, the difficulties experienced by students with HI in Taiwan, and the culture of education in Taiwan. Finally, the chapter will outline the purpose of this study and provide a summary of the chapter content.

Special education in Taiwan has changed over the last 20 years due to the economic improvement and emphasis on human rights. Since the 1984 Special Education Act was passed and regulated in Taiwan, all students now have the right to instruction and are placed in programs and classrooms according to their ability. Article 21 states that

Disabled students may seek admission to all levels of school through the entrance examination or other channels administered by the government agency in charge of education administration such as screening and examination, recommendation, and registered enrollment. All levels of schools shall not deny admission on the ground of the student's physical and /or mental disabilities. (Ministry of Education, 1984)

The 1997 revision to the Special Education Act added that universities need to accommodate students with disabilities in the university admission process. The 1999 revision pointed out that there was still more to be done: post-secondary institutions need

to improve their physical accessibility and establish guidance services that include informal individual and group counselling. They were also required to offer clubs and volunteer opportunities, seminars and extracurricular activities and provide emotional, learning, social and career counselling. This Act has provided students with disabilities more opportunities to enter post-secondary education. According to Taiwan's Ministry of Education's statistics (2001), the number of students with disabilities is estimated to be 2,900, including those with hearing, visual and physical disabilities in all levels of education.

These changes in the Taiwanese education system are similar to changes in North America. The Education for All Handicapped Children Act, which was part of the Public Law 94-142 passed in the United States in 1975, had a powerful impact on North American special education (Moore, 1996). The law changed education for students with disabilities, as it mandated that all students with disabilities receive appropriate education, appropriate screening procedures, consultations with parents, a written individual education plan (IEP), placement in the least restrictive environment according to the student's needs, as well as other features (Weber & Bennett, 1999).

When Section 504 of the Vocational Rehabilitation Act (1973) and the ADA (1990) (Americans with Disabilities Act) were passed, further dramatic educational reforms took place in the United States, including an increased availability of various support and access services for students with HI attending post-secondary institutions in that country. Consequently, the number of students with HI entering post-secondary education has also increased dramatically. Yet, despite the expansion of these services, the dropout rate among these students remains quite high. In the United States, for example, only one out of every four post-secondary students with HI actually graduates (Stinson & Walter,

1997). This low rate might be explained by the fact that students with HI still tend to remain isolated socially from their hearing peers despite all the services available to them. This is due to the fact that students with HI lack the skills necessary to interact independently on the college or university campus and often find that they are isolated from the educational community and unable to join in the usual campus social activities of hearing students (Stinson & Walter, 1992).

In Taiwan, students with HI face the added difficulty of keeping up with their studies because they often lack the required academic skills. Until recently, only hearing students were required to pass a national entrance exam to enter university, and students with HI did not have to take the exam. As a result of this positive discrimination, a survey of students with HI enrolled in post-secondary institutions found that the math and language ability of students with HI greatly lagged behind that of their hearing peers. Consequently, many students with HI found it difficult to keep up with their studies and some eventually dropped out (Hsiao, Hsu & Wu, 2001). Therefore, in 2001, the Ministry of Education required that students with disabilities choose either a national entrance test with hearing students or an entrance test administered to all students with disabilities who have hearing, visual and physical disabilities. Only certain universities open their doors to students with HI, and only certain departments in those universities, such as the department of fine arts at the university that is the site for this study.

The university offers support services for students with HI, including special courses to help them make the transition from high school to university. For example, one Taiwanese university specializing in the arts offers students with HI a program with special classes in English and Chinese for first-year students. The Centre for Counselling Services also provides tips for professors to accommodate the needs of students with HI.

Each student with HI is also assigned a learning partner who takes class notes for the student with HI and helps him or her with assignments. The centre also distributes brochures with tips for professors and students with hearing and visual impairment, offers activities and trips for students with hearing and visual impairment, and trains and interviews the learning partners. Additionally, they provide individual counselling for students, especially in their first year, offer career advice, and organize activities for parents. However, the range of services offered depends on the institution and the number of students with HI who are enrolled.

According to the results of a recent survey of post-secondary students in Taiwan with the above-mentioned disabilities, students with HI continue to have problems despite the support services offered in these institutions (Hsiao, Hsu & Wu, 2001). They have difficulties understanding the content of the lectures, and they feel unable to cope academically because they have insufficient language and math ability. When students with HI present academic problems, they prefer to ask for help from other classmates to try to resolve the problems by themselves. They seldom ask for help from the counseling center. They are disappointed with their social relationships, since they do not know how to establish and maintain close or deep relationships with hearing peers and they feel frustrated due to their limited hearing and communication abilities. Most of them make friends with peers with HI and they seldom make friends with hearing peers, and rarely attend extracurricular activities. Hence, they isolate themselves due to their condition (Chang, 2000).

Those students who come either from schools for students for the deaf or from vocational high schools have much more difficulty keeping up in their courses because they have not been instructed in basic subjects such English, Chinese, math, or even

science in high school (Lin, 1994; Lin & Chyi, 1990). Hence, attaining high academic achievement is a challenge for students with HI. So much importance is placed on good marks that some students with disabilities who obtain extremely low marks in their courses are even driven to suicide (Hsiao, Hsu & Wu, 2001).

However, despite their difficulties, some students with hearing impairment do persist in their studies and graduate. At this point, there is no information on the reasons for these students' success. Therefore, their school experiences and the reasons for their persistence in their studies need to be explored.

Education in Taiwan

The Taiwanese education system follows a basic 6-3-3-4 pattern (six years in primary, three years in junior high, three years in high school, and four years at university). Public and private sector commitment to education has expanded rapidly in recent years as a result of dramatic economic growth. There are now 42 universities, 45 independent four-year colleges focusing on specific disciplines such as fine arts, medicine, technology and teacher training), and 50 junior colleges (Ministry of Education, 2006).

Taiwanese culture puts great value on literacy and education. There is intense competition for all students to pass national entrance exams to enter high school and university. There are two types of high school: regular and vocational. The regular high schools are more academically demanding and are more prestigious. Public universities have much lower tuition rates and allow graduates to obtain high-level employment (high paying, stable jobs with good benefits). The students need to take many quizzes, tests, and exams from primary school on, and they need to memorize many details from textbooks to get high marks in the exams. The marks are posted, so everyone knows who did well academically and who did not. Not all students work hard to memorize the

contents of their textbooks because they find it quite boring. Some students do not spend enough time reading, or do not achieve good grades year by year, and those students tend to find it hard to keep up.

A high proportion of Taiwanese employers require applicants to have a university degree to qualify for jobs with good pay, stability, and generous benefits. Applicants without a degree are limited to low paid jobs, where the working conditions are poor, such as in factories or in property maintenance. Students aspire to earn a degree and in turn a desirable job. It is an honourable thing for people to have degrees and careers as professionals, and those who do not have degrees are considered inferior. Parents tend to push their children in school, as students need to start studying hard in primary school to ensure a future in post-secondary education. Similarly, primary and secondary teachers push students to earn high marks and pass the entrance exams for high schools and universities with a solid reputation.

Purpose of the Study

Previous research has shown that students with HI in Taiwan were dissatisfied with their studies due to their disabilities, difficulties with adjustment, and sometimes failure in post-secondary programs (Chang, 2000; Ho, 1993; Hsiao, Hsu & Wu, 2001; Lin & Chyi, 1990; Ling & Chen, 2003). Despite these drawbacks and constraints, some students with HI persist and graduate (Hsiao, Hsu & Wu, 2001). At this point, there is no information on why these students succeed. We need to focus on the experiences of the students themselves: their learning habits, the attitudes of their teachers, peers, and even of the school staff, the support services, and the students' interaction with the university environment. As well, their successes and the reasons for their persistence in their studies need to be examined. Therefore, the purpose of this study was to explore their successful

experiences, how they have overcome obstacles, and the factors that have led to their persistence in their studies. The conceptual model for this exploration is Tinto's Student Integration Model (SIM) (1993, 1997). Tinto does not define persistence; however, in this study it will refer to remaining in a post-secondary program until it is completed and not withdrawing at any time. The SIM identified three factors predicting persistence: pre-entry attributes, academic integration, and social integration. According to Tinto, the greater the individual's level of academic and social integration, the greater his or her subsequent commitment to graduation and to the institution of attendance. These subsequent commitments directly influence persistence.

This study is organized into seven chapters that deal with the key aspects of this research. Chapter 1 is an introduction and overview of the problem, education in Taiwan, and purpose of the study. Chapter 2 contains a review of literature concerning the withdrawal and persistence of hearing students and students with disabilities and hearing impairment in post-secondary institutions; Tinto's Student Integration Model and support service; the conceptual model which guided this study, and a statement of research questions in this study. Chapter 3 reports the methodology used in this study, describes the paradigm on which it was based, and the procedures of data collection and analysis. Chapter 4 describes the profile of each participant with HI. Chapter 5 presents the perspectives of the learning partners, professors, and personnel from the Centre for Counselling Service on the students with HI. Chapter 6 presents a cross case analysis. Chapter 7 provides a synthesis of the findings, a discussion of the findings in relation to the research questions, an outline of the limitations of the study, and a discussion of the contributions of this study to theory. It also offers suggestions for future research, presents recommendations for practice, and makes concluding comments.

CHAPTER 2

REVIEW OF THE LITERATURE AND CONCEPTUAL MODEL

This chapter reviews the literature concerning the withdrawal and persistence of hearing students and students with disabilities and hearing impairment in post-secondary institutions. It then presents Tinto's Student Integration Model (SIM), which provides the conceptual model that guided this study. The university in Taiwan with a focus on art, which was the site of this study is introduced and a statement of the research questions is presented.

Review of the Literature

Tinto's (1975, 1987) model of student persistence or departure is widely explored and discussed in studies on higher education. Tinto's model asserts that a student comes to a particular institution with a range of background characteristics (e.g., sex, academic ability, secondary school performance, family social status), goal commitments (e.g., highest degree expected, importance of graduating from university), and institutional commitment. It is the individual's integration into the academic and social systems that most directly relates to his or her persistence or withdrawal. According to Tinto, academic integration relies not only on the student's academic performance but also on his or her interactions with faculty and staff, while social integration reflects the student's participation in and satisfaction with extracurricular activities and peer-group relations.

Many studies on the withdrawal or persistence of post-secondary students have used Tinto's (1975, 1987) models of student withdrawal or persistence as their framework, testing his model with different groups of students, including students in four-year institutions and two-year institutions and studies on students with disabilities and students with HI in four-year institutions. This literature review considers the findings of

researchers concerning the validity of Tinto's model, and examines studies conducted in Taiwan on students with disabilities and HI who studied in post-secondary institutions, which did not use Tinto's model.

Tinto's Student Integration Model

Tinto (1975) viewed withdrawal or persistence as the result of a process of interaction between the students and the college or university. Higher education institutions are comprised of both academic and social systems, and it is the quality of a student's interactions with the academic and social systems of an institution that will ultimately influence a student's decision to depart or to persist.

Tinto's work developed from the earlier work of Spady (1970), who was the first to incorporate Durkheim's (1951) theory of suicide (according to which an individual who is unable to become a member of or integrate into society is at a high risk of committing suicide) into a model of college dropout. Tinto described two kinds of integration: social and intellectual. Social integration refers to personal connections and day-to-day interactions with different members of society. Intellectual integration refers to sharing the values of other members of society. According to both Tinto and Durkheim, individuals who are isolated from their communities, either socially or academically/intellectually, most often decide to withdraw (in Durkheim's case, from life). The need to "integrate" is the key point that these two conceptualizations share. It is in this way that Durkheim's perspective provided insight into the reasons behind a post-secondary student's decision to withdraw or persist in higher education (Tinto, 1993).

Tinto also applied Van Gennep's anthropological notion of the tribal "rite of passage" concept to describe moving from the membership in one community (for

example, high school, family) to the membership in another (college) as a process that covers three stages: (1) Separation from past communities (high school friends, family, and so on). (2) Transition into the new college community through learning the values and expectations of that community. (3) Incorporation into the college community, through actually adopting the norms and behavioral patterns of the new community (Tinto, 1993).

According to Tinto's (1975) Student Integration Model (SIM) (see Appendix B), there are three factors predicting persistence, namely pre-entry attributes, academic integration, and social integration, and it is the interplay of these factors that determines persistence or withdrawal. The individual characteristics of post-secondary students include family background, individual attributes and pre-college schooling. The family background characteristics include socioeconomic status, parental education, and parental expectations. Individual attributes focus on a student's academic ability, gender, race and social status. Pre-college schooling includes the student's former high school academic achievement, and social ability.

These individual characteristics influence the student's initial levels of commitment to the institution and to the goal of college education. Both the student's entry traits and initial levels of commitment affect the degree to which an individual becomes integrated into the institution's academic and social systems. Academic integration includes grade performance and intellectual development, while social integration can be enhanced by faculty interactions and peer-group interactions. According to Tinto (1975), the greater the individual's level of academic and social integration, the greater his or her subsequent level of commitment to the goal of college graduation and to the institution of attendance. These subsequent commitments, in turn, have a direct influence on the persistence of the

individual student.

In 1987, Tinto made further revisions, including student interaction with faculty in the category of academic integration, and including extracurricular activities in the category of social integration. According to Tinto (1987), academic integration stems not only from the student's academic performance but also from his interactions with faculty and staff, while social integration reflects the student's participation in and satisfaction with extracurricular activities and peer-group relations. Tinto (1987) suggested that the effects of academic integration, social integration, final institutional commitment, and final goal commitment may vary as a function of the type of departure behavior under consideration. In 1993, he added a new variable to his model entitled "External Commitments," which refers to students' satisfaction with their lives off campus (see Appendix B). This can include their commitments to friends, family members, community activities, work, and so on. The more the students, especially those who commute, are satisfied with their lives off campus, the more they will persist with their studies.

In 1996, Tinto changed his focus from the departure of students to their persistence, due to his increased interest in the retention of students by developing new programs (Tinto, 1996). In 1997, he further revised his integration model, emphasizing the importance of the classroom, where the social and academic systems meet and where education in the formal sense is experienced. The classrooms serve as learning communities through group peer support and collaborative learning strategies, and a student's experience in the classroom may influence his or her desire to persist. Students who share their learning experiences with peers tend to put more emphasis on their own learning (Tinto, Goodsell, & Russo, 1993). Tinto (1998) stated further that learning

communities provide benefits, such as enabling students to learn, interact with peers, and form supportive peer groups, which extend beyond the classroom.

Persistence or Withdrawal of Students in Four-year Institutions

Academic and social integration

Academic and social integration are two factors predicting withdrawal or persistence. Stoecker, Pascarella and Wolfle (1988) used the survey method to carry out a nine-year national multi-institutional study on Tinto's (1975) model of the withdrawal-persistence process for 5,240 students. Their findings supported his model and they concluded that, while college characteristics and the early choice of the student's college major influenced their withdrawal/persistence, academic and social integration were the most important factors in withdrawal or persistence. These findings were consistent with a survey conducted by Milem and Berger (1997) on 718 first-year residential undergraduate students, which also showed that academic and social integration were the most important factors related to persistence. Similarly, Braxton, Vesper and Hossler (1995) surveyed 263 freshmen at four-year colleges and universities, and their findings indicated that both academic and social integration were important factors relating to persistence, and were positively influenced by their expectations for academic and career development being met. The level of social integration depended on individual involvement in university life.

A study conducted by Pascarella and Chapman (1983) on students at four-year universities also indicated that academic and social integration were important. They concluded that social integration played a stronger role in influencing persistence at four-year primarily residential institutions, while academic integration was more important at four-year primarily commuter institutions.

Other studies, however, have showed that the level of importance of social and academic integration varies in different groups. A survey of 585 freshmen and senior students in one institution found that social integration in particular had a significant effect on the 508 students who persisted at university, although academic integration was also found to be important (Hicks & Lerer, 2003). Sagy's (2000) study of 151 first year Russian immigrants and 138 Israeli freshmen at an Israeli university concluded that academic integration was more important than social integration. The findings showed that academic integration influenced persistence, while social integration did not. Although there were differences between the two groups in terms of background characteristics, academic integration proved to be the main factor for both groups. Academic integration was also the most important factor in a study examining the influence of the quality of learning experience in predicting 200 juniors' and seniors' persistence and attrition, in which the dominant predictors of persistence were: student-faculty contact, students' involvement in their academic program, and the content of that program (Neumann & Finaly-Neumann, 1989).

To conclude, academic and social integration appear to be the main factors predicting students' withdrawal or persistence in post-secondary education, however, their strength as predictors varies with the sample being studied.

Goal commitment and institutional commitment

The results of other studies indicated that goal and institutional commitments were influential factors relating to persistence. For example, Allen and Nora's (1995) findings in their survey of 1884 freshmen investigating the effect of goal commitment on the persistence process revealed that goal commitment was a significant factor in persistence. Similarly, Cleveland-Innes (1994) found in a study of 92 nontraditional-age students that

goal commitment was a predictor of persistence, whereas in another group of 233 traditional-age students, they found that goal commitment was not an influential factor in withdrawal. Pascarella and Terenzini (1980), in their study of 773 freshmen, showed that goal commitment (a person's commitment or non-commitment to personal educational and occupational goals) was a main factor predicting withdrawal or persistence, but added that institutional commitment was also an important factor.

Institutional commitment (the person's commitment to the institution in which he/she is enrolled) was an important factor according to a study conducted by Eccles (2001), who applied Tinto's model as a conceptual framework in a study involving a group of 59 nursing students. The study compared the differences between the persisters and the leavers. The 19 dropouts had lower level intentions, goal and institutional commitment, and more external commitment than the 40 persisters. Strauss and Volkwein (2004) likewise identified institutional commitment as an influential factor predicting the persistence of 5,718 students attending two-year institutions, and 2,499 students attending four-year institutions. The results of their study revealed that classroom experiences, social activities, and friendships were strong predictors of institutional commitment. Classroom experience was a more influential predictor in the two-year institutions, while social integration had more impact on institution-commitment for students in the four-year institutions.

However, one quantitative study testing two groups of students who dropped out (237 students) and persisted (234 students) identified that academic integration, goal commitment, and institutional commitment accurately discriminated between those who withdrew and those who persisted (Getzlaf, Sedlacek, Kearney, & Blackwell, 1984). In this study, social integration was not considered an important factor relating to

withdrawal or persistence.

On the other hand, some studies have identified factors other than, or in addition to, academic and social integration and goal and institutional commitment as the most influential factors relating to persistence. For example, Grosset (1991) used a questionnaire to test Tinto's model in his study on the persistence of 449 younger (age 14-24) and older (students aged 25+) students. His findings, like other studies, indicated that academic integration and, to a lesser extent, social integration were important factors relating to the persistence of younger students. However, self-assessed study skills were the most important factor for older students, and student perceptions of cognitive and personal development and goal commitment were important in both groups.

A recent five-year study investigating the factors affecting the persistence of 3,450 college students in the United States found that they were different each year. Financial aid was an important factor for low-income students in the first year. Students whose mothers graduated from college were less likely to leave than other students, and this effect was strongest in the second year. Students who had a high SAT score were less likely to drop out than lower score students. Moreover, unlike other research, academic and social integration were not significant factors in their study (Ishitani & DesJardins, 2002).

In summary, most researchers have used quantitative research methods and chosen freshmen to predict or test Tinto's model in four-year institutions, including residential and nonresidential institutions. The findings indicated that, while academic and social integration were critical determinants of withdrawal or persistence, other findings such as financial situation, self-study skills, institutional commitment, and individual goal commitment were also important (see Appendix C).

*Persistence or Withdrawal of Students in Two-year Community Colleges**Academic and social integration*

Community college students include mostly commuter and older students, rather than traditional students who live in residence and are enrolled in four-year programs. Tinto's integration model has also been used to predict and explain these students' withdrawal or persistence, and the findings for academic integration and social integration were mixed. For example, studies such as Mutter (1992), found that academic integration was more important than social integration for two-year community college students. Mutter used Tinto's model to study the persistence and withdrawal of 766 community college students, and the findings showed that those students who persisted had greater academic integration, goal and institutional commitment and encouragement than those who withdrew. Similarly, Nora, Attinasi, and Matonak (1990) surveyed 253 freshmen and found that Tinto's model was effective for predicting academic integration, but not social integration, in the retention of community college students. Furthermore, Napoli and Wortman (1996, 1998), who conducted a meta-analysis of six studies, found that academic integration significantly affected both term-to-term and year-to-year measures of persistence, whereas social integration affected only term-to term persistence.

Borglum and Kubala (2000), however, applied Tinto's model to a survey of 462 two-year community college students and found that both academic and social integration were important in predicting persistence. Conversely, Bers and Smith (1991) surveyed 1,142 students, and their findings showed that academic and social integration had both direct and indirect influence on community college students' persistence and graduation. Additionally, unlike other researchers, they found that social integration was more

significant in discriminating between persisters and non-persisters than academic integration.

Goal commitment and institutional commitment

Another study using variables to test a modified version of Tinto's student attrition model on 3,544 students in two-year colleges concluded that commitment played an important influence on student persistence. Academic integration was less important, and social integration was found to be irrelevant (Nora, 1987). Results for students attending two-year community college were inconsistent (see Appendix C).

The findings for two-year colleges showed that academic integration seems the most important factor relating to persistence. These observations were largely consistent with a study conducted by Pascarella and Chapman (1983), who compared 2326 freshmen in 11 post-secondary institutions, including two-year commuter institutions. The results generally supported the predictive validity of Tinto's (1975) model. The basic differences across type concerned the concepts of social and academic integration.

Critique of Studies of Students in Four-Year and Two-Year Institutions

Studies of four-year institutions conducted Tinto's SIM as their framework demonstrated inconsistent findings. Reasons for these inconsistencies include: using different versions of Tinto's model (e.g., Braxton, Vesper & Hossler (1995) used Tinto's 1975 model; Allen & Nora (1995) used Tinto's 1987 model; and Milem & Berger (1993) used Tinto's 1993 model); different numbers of participants (e.g., Stoecker, Pascarella & Wolfle (1988) surveyed 5,240 students, whereas Nora, Attinasi, & Matonak (1990) surveyed 253 students); different methods (e.g., Milem & Berger (1993) used the survey method; Getzlaf, Sedlacek, Kearney & Blackwell (1984) used a questionnaire; Braxton, Vesper & Hossler (1995) used variables; and Pascarella & Chapman (1983) used path

analysis).

Similar inconsistencies may be found in two-year institutions (e.g., Nora, Attinasi & Matonak (1990) used Tinto's 1975 model for 253 students, whereas Borglum & Kubala (2000) used Tinto's 1987 model for 2,115 students. Borglum & Kubala (2000) used the survey method, whereas Mutter (1992) used a questionnaire).

The inconsistencies in the results of studies using different versions of Tinto's SIM, methods, and numbers of participants point to the need for further research to solidify our understanding of the factors contributing to persistence.

Persistence of Students with Disabilities in Four-year Institutions

Duquette (2000) applied Tinto's (1975) model in a study on students with disabilities. She interviewed 17 post-secondary students with different types of disabilities to examine their university educational experiences. The findings showed that individual characteristics (such as goal-orientation, creativity, self-discipline, motivation, acceptance of their disability, along with family factors and prior educational experience) were linked with persistence. Individual characteristics and academic integration were more important factors than social integration for persistence. Support from family and friends and understanding professors also had an impact on persistence.

These findings are largely consistent with another study, in which an open-ended interview method was used to explore the factors contributing to academic success among students with disabilities (N=36). The findings showed that both individual characteristics (discipline and effort, acceptance of their disability, personal ambition, self-confidence, prior knowledge and experience, and ability), and the social support/campus climate (family support, interaction with other students, interaction with faculty, and university support service) were important factors affecting academic success

(Smith & Nelson, 1993).

In another study, however, social integration was found to be a significant factor relating to persistence. Wiseman, Emry and Morgan (1988) used a questionnaire to predict academic success for 100 students with disabilities at the university level. The questionnaire addressed the campus' social climate, the quality of its programs and instruction, and the students' academic and career expectations. The findings revealed that social alienation negatively affected the motivation of the students with disabilities, and social adjustment positively affected their perceived competence.

Persistence or Withdrawal of Students with Disabilities in Taiwan

Research on students in Taiwanese universities focuses on the causes of stress among students with disabilities. Lin and Chen (2003) conducted in-depth interviews with six post-secondary students with disabilities in Taiwan about their experience of stress, and found that academic pressure, career prospects, social relationships, and the family were the main stressors for them. Academically, they were afraid of exams, assignments, new learning environments, and strict teachers. Some had dropped out or considered dropping out in their first, second, or even third year, due to their low academic achievement and failure in some courses; and some doubted their ability to complete a degree, even with hard work. While Tinto's model was not used in this study, the results suggested that these students did not experience a sense of academic integration.

Chang (2000) also showed the importance of academic integration to persistence. He conducted in-depth interviews with 12 post-secondary students with disabilities in Taiwan about their quality of life. Interviews on their studies and peer relationships revealed satisfaction with their school and family support, and dissatisfaction with their academic

life (the support service and the negative attitude of the teachers, who disliked students with a disability). The students with disabilities concluded that they were accepted and respected by their peers if they coped with their disability and studied hard, but they remarked that they were sensitive to other people's reactions and were easily hurt.

Hsiao, Hsu and Wu (2001) similarly demonstrated the importance of academic integration on persistence in a questionnaire survey of 160 students with disabilities, including hearing and visual impairment, as well as cerebral palsy. They also conducted in-depth interviews with 12 of these students and a group interview with the professors and personnel to investigate the learning situation of post-secondary students with disabilities. Interview questions covered adjustment to campus life, the academic learning situation, career preparation, the support services offered by the university, peer relationships, and emotional adjustment to university life. They also noted that most of the students did not experience any difficulties in adjusting to campus life, but they all found it hard to keep up with the professors' lectures. They also reported that some academic subjects were difficult for them, especially for those with HI. Students with HI often performed poorly academically and failed courses. They preferred to ask their classmates for help or to resolve their academic problems on their own. In terms of career preparation, only 40% of the students planned either to find a job or attend graduate school. In terms of the support service system, most students felt that the services were insufficient and needed to be improved. They all had difficulties with peer relationships and seldom consulted the counseling service. They preferred to resolve stresses or problems by themselves.

In individual interviews with the students, most of them reported that they had difficulty keeping up, especially in math, science, and some courses using English text

books. In the group interviews, the service personnel and professors said that most students with disabilities had peer relationship problems and problems in English, math, and science courses. The students with disabilities also found that they had difficulty finishing assignments, especially when these involved science experiments. Most of them preferred to resolve problems on their own, but a few would ask for help from their peers, the support service personnel or professors. They also acknowledged that they had difficulties with peer relationships.

To conclude, academic integration was one of the most important factors predicting persistence for post-secondary students with disabilities. Furthermore, personal characteristics, goal commitment, and external support such as friends or family were also important factors affecting persistence (see Appendix C).

Persistence or Withdrawal of Students with Hearing Impairment

Various studies using Tinto's (1975, 1987) models with modifications have shown that the critical factors affecting the persistence of students with hearing impairment are academic and social integration. For example, Foster and Elliot (1986) interviewed 20 students at the NTID (National Technical Institute for the Deaf) who had transferred from other colleges, and found that the three reasons why students with HI left colleges were as follows: they could not communicate with their professors; the support services did not provide enough help; and they had limited opportunities to socialize with their peers.

Similarly, Dagel and Dowaliby (1989) found that both social and academic integration were important factors affecting withdrawal/persistence. They administered a questionnaire to 90 students in the third week of their first academic semester. The questionnaire focused on the importance of academic and social factors in predicting those who would drop out at the end of the semester. The study predicted correctly in

60% of the cases. Walter and DeCaro's (1986) survey of 95 post-secondary programs for students with hearing impairment in the US also suggested that social and academic isolation were the main causes of the high rate of attrition for students with HI. They found that their average attrition rate was one-third higher than the rate for hearing students.

These findings were consistent with a student integration survey conducted by Dowaliby, Garrison and Dagel (1993) on two groups of freshmen at NTID, a year one study composed of 192 students, and a year two study of 143, with academic and social integration difficulties. The results revealed that 28 positive and negative self-response statements in the survey were consistent with issues related to institutional integration, that is, of academic and social integration in the NTID environment. Their findings supported a previous conclusion, that students' adaptation to the academic requirements and social expectations of their environment are crucial.

Other studies found that social integration was the most important factor influencing withdrawal or persistence. For example, a study conducted by Stinson, Scherer and Walter (1987) on 233 participants indicated that school activities, distance from home, college achievement, speech/reading ability, sponsored college activities, and social satisfaction were important factors in influencing a student's persistence, and that the latter was the most important factor. The greater the social satisfaction, the more likely they were to persist. This result was consistent with Tinto's (1975) model in which persistence is a result of the students' interactions with the social system of college, as well as with the academic system.

The above findings were consistent with Foster and Brown's (1989) study, in which Tinto's (1975, 1987) model was used to examine the importance of academic and social

integration in withdrawal or persistence at post-secondary institutions. They used qualitative methods and conducted individual interviews with 20 NTID students with HI on factors that influenced their academic and social integration. Students with HI felt they could compete successfully on an academic level with their hearing peers, but, on the other hand, they experienced isolation in the classroom environment. This isolation was due to the physical grouping of hearing impaired students with a specialized interpreter in the classroom, and the students' perceptions of themselves and others. The students with hearing impairment preferred to join clubs for students with HI or other activities to connect with students with hearing impairment. They also felt comfortable making friends with students with hearing impairment because of the importance of group identification and the desire to avoid negative social prejudice.

Foster and Decaro (1991) found that social integration was an important factor in withdrawal and persistence, and identified factors influencing social integration. Qualitative research methods were used to investigate the factors facilitating or impeding interaction between deaf and hearing students at a residence hall on the campus of the Rochester Institute of Technology. The perceived advantage of living in a dormitory which had both hearing students and students with HI, communication skills, knowledge of one another and attitudes and feelings about hearing or deaf people were the four main categories that influenced the level of social integration.

English's (1993) dissertation applied Tinto's (1975, 1987) model to an institution integration scale investigating the influence of social integration on 60 freshmen college students with HI. This study examined the role of "support services" in the integration and retention of college students who were hearing impaired. Students felt moderately integrated into their academic systems, and that the support services facilitated such

integration. However, students did not feel as integrated into their social systems, and the support services did not contribute to social integration.

Studies of hearing students as participants produced similar findings. Brown and Foster's (1991) study focusing on the reaction of hearing students to their peers with hearing impairment drew similar conclusions concerning the importance of social integration. Using interviews and focusing at Rochester Institute of Technology (RIT), on how hearing students perceived their deaf classmates and how these perceptions influenced integration, their results showed that deaf students were indeed integrated and successful in their academic program in terms of their participation and performance, and could even compete with their hearing peers. In terms of social integration, however, they were not as successful because the hearing students felt that the behavior or attitude of the students with HI was negative towards the hearing students.

Coryell, Holcomb, and Scherer (1992) conducted focus group interviews with, and collected open-ended written responses from, 62 hearing students who knew or had frequent contact with students with HI to investigate the social interaction between students with HI and hearing students at RIT. They observed that personal contact, good communication, and acceptance of cultural diversity contributed to positive attitudes toward deafness. But they also found that there was little meaningful interaction between the two groups.

Stinson and Walter (1992, 1997) studied background factors and academic and social factors. The background factors included the students' past school experiences and their personal characteristics (including student motivation and career goals). Academic factors included the degree of learning difficulties, their major area of study, and communication. The social factors included making friends, participation in activities,

and the ratio of students with HI to hearing students. They included the provision of support services. The authors concluded that these four factors included in Tinto's (1975) model needed to be considered when designing programs to support students with HI at post-secondary institutions.

In summary, academic and social integration were important factors predicting the persistence of students with HI, and some studies found that social integration was the more important factor influencing their persistence.

Persistence or Withdrawal of Students with Hearing Impairment in Taiwan

Lin and Chyi (1990) demonstrated that the individual characteristics of pre-university education experience affected the students' adjustment to university life. A survey method investigated the adjustment of 140 students with HI in post-secondary institutions. The findings revealed that 40% of students with HI failed courses. They had difficulties studying English, in basic courses such as math, chemistry, and physics, and some professional courses. Over 80% of the professors considered the academic performance to be lower than that of hearing students, and 23% thought that their basic academic abilities were too low for post-secondary education, especially in English, math, and science, a finding in accordance with general findings reported previously. Furthermore, 50% of the professors reported that students with HI submitted inadequate assignments. Students with HI thought the professors did not pay enough attention to them during the lectures because they did not reserve the front seats for students with HI, and did not face them while speaking, did not speak slowly and loudly, and did not write enough notes on the blackboard. They also reported that they often asked for help from hearing classmates if they had academic problems and used their notes. It was also shown that 66 % of the professors did not offer individual academic guidance for students with

HI. The most effective communication method between students with HI and professors was writing, because most professors did not know sign language and they did not understand the speech of students with HI.

Kao (1995) conducted in-depth interviews with three successful people with hearing impairment who had been nominated as role models by others for their level of education, stable employment, and social respectability. Two of them held a university degree. They said that when they were students, they were quite independent in their learning and took the initiative in their studies. They revealed that their academic abilities at university were much lower than those of the hearing students. However, they demonstrated a strong motivation to learn and studied hard, and overcame their difficulties. They also considered self-confidence and hard work to be the major forces driving those with HI to succeed. As well, they thought their parents and teachers had been very influential in their lives. These findings were consistent with Chang's (1999) interview with 11 successful people with hearing impairment (role models due to their hard work and high level of achievement), ten of whom held a university degree. Their individual characteristics were positive: they had high self-confidence and learning motivation, were enthusiastic, worked hard by themselves, and accepted their disability. Family support and encouragement from teachers also contributed to establishing solid academic abilities that contributed to their achievement.

Ho (1993), while not using Tinto's model in her study, reached conclusions that supported Tinto's identification of individual characteristics as an influential factor in persistence. A questionnaire and statistics on academic average in the first semester indicated the level of adjustment to college life of 82 students with HI from different backgrounds. There were no significant differences between the students in the study in

their self-assessment of college adjustment and achievement in terms of gender, year, university club attendance, communication method, and levels of satisfaction with the support service offered by colleges. She found, however, that students with HI who used oral communication and grew up in a hearing environment adjusted better and achieved higher grades because they were accustomed to using speech in their learning environment and the teachers treated them like hearing students. Students with HI from regular or mainstream high school classes adjusted better to post-secondary learning than students from schools for students who are deaf.

In brief, most researchers have used elements of Tinto's model (1975, 1987) to predict or explain persistence in large samples of post-secondary first year students with HI. The institutions under study included NTID and RIT in the United States, because they had more students with hearing impairment than other institutions. Academic and social integration were two important factors in predicting students' withdrawal or persistence, but social integration played a stronger influence on students' withdrawal or persistence (see Appendix C). In Taiwan, however, individual characteristics were more important for students' adjustment to university life.

The comparison of four groups of students (four-year and two-year students, and students with disabilities and with HI) revealed that, in general, academic and social factors were the most important predictors of persistence or withdrawal. For two-year students and those with disabilities, academic factors were the most important consideration. For four-year students, both academic and social factors were important. For students with HI in the US, social factors were more important than academic factors, but in Taiwan individual characteristics were important.

Criticisms of Tinto's Student Integration Model

Although Tinto's (1975) model has been widely accepted as useful for explaining students' departure or persistence, it has nevertheless received criticism. It has been described as suitable only for traditional, young students who graduate from high school, enter postsecondary institutions directly and live on campus (Towles & Spencer, 1993). Braxton, Sullivan and Johnson (1997) examined 13 propositions stemming from Tinto's model in their review of ten studies presented at conferences, and found support for only five propositions, and only insofar as residential institutions are concerned, not commuter institutions. The five propositions for which they found support were: (1) student entry characteristics affect the level of initial commitment to the institution; (2) the level of social integration determines the level of subsequent commitment to the institution; (3) this subsequent commitment increases the likelihood of persistence; (4) a high level of commitment to the goal of graduation compensates for a low level of commitment to the institution, and vice versa; and (5) academic and social integration are mutually interdependent in their influence on student persistence.

Tinto himself (1982, 1993) acknowledged limitations to his 1975 model. He realized that it addressed only certain aspects of attrition behaviour and that it explained typical student behavior in relation to residential institutions alone. Moreover, he noted that he had neglected to differentiate between students who withdrew from an institution to continue their studies elsewhere, and those who dropped out from higher education altogether. In addition, Tinto noted that his 1975 model did not address the issue of the external influences on a student's decision to participate in or even persist in college. He further overlooked the inclusion of two-year program institutions and failed to consider the educational diversity experienced by students due to their gender, socioeconomic

status, or race. He also realized that in 1975, he had omitted to consider the financial factor with regards to college persistence and that his original model was not well suited to explain students' departure from non-residential institutions.

Attinasi (1989, 1994) also argued that Tinto's (1975) model has some weaknesses, such as comparing the integration of students into college life with Van Gennep's tribal group initiations. Studies of psychosocial and cultural phenomena, such as departure in higher education, should be undertaken in their cultural context, not with reference to other groups, such as tribal groups. He suggested that qualitative research should be conducted on the phenomenon of students' departure or persistence.

Despite these criticisms, Tinto's model provides a comprehensive explanation of the complex phenomenon of the withdrawal or persistence among post-secondary students. Braxton, Sullivan and Johnson (1997) reported that Tinto's integration model caught the interest of many scholars researching the withdrawal/persistence of students in higher education. His model has been used in many studies to try to understand and predict why students withdraw or persist. The model has received considerable empirical testing, which has validated the importance of the two core concepts of academic and social integration (Iverson, Pascarella, & Terenzini, 1988; Terenizi, Pascarella, Theophillides, & Lorang, 1985). Most researchers have applied Tinto's integration model, using quantitative methods with "traditional" students, that is, first-time (no previous college or university record), full-time freshmen, who are enrolled in universities.

Critique of the Literature on the Withdrawal/Persistence of Students with Hearing Impairment

Most researchers have used quantitative research methods to survey first-year post-secondary students in order to predict dropout or persistence levels. To date there is

little research in this area using qualitative methods (in particular among students with hearing impairment), which may be revealing because every student is different and each case is unique.

Attinasi (1989, 1994) contended that the use in attrition research of quantitative data such as institutional records and fixed-choice questionnaires effectively excluded the student's own perceptions of why he or she persists or drops out. Pascarella and Chapman (1983) similarly suggested that the reasons for persistence/withdrawal were highly personal, and that an examination of individual, personal experiences might be more useful than a quantitative approach. Mckeown, Macdonell and Bowman (1993) suggested that we should examine how students negotiate university life, and only then formulate a theory of dropout/persistence, which takes account of the students' experiences and the context in which they make their decisions.

Tinto's factors have been used to predict and explain the dropout or persistence of students with hearing impairment in many studies. Most of these studies used quantitative methods to predict or explain why students withdraw or persist (Dagel & Dowaliby, 1989; Dowaliby, Garrison, & Dagel, 1993; Stinson & Walter, 1992; Walter & DeCaro, 1986). These studies used samples mainly from large institutions for students with hearing impairment such as NTID, RIT, whose programs were designed specifically for U.S. students. The findings of these studies may not always apply, firstly, to other institutions, and secondly, in developing countries, as every country has a different education system and cultural context.

Qualitative methods have seldom been used to study the withdrawal or persistence of students with HI. Qualitative methods take into account the students' perspective, and such an approach seems to be more appropriate in a study exploring and seeking to

understand the learning experiences of post-secondary students with HI. This method will provide insight into necessary accommodations and programs to meet the needs of those with disabilities.

Support Services and Students with Hearing Impairment

Due to the language deficiency of students with hearing impairment, the support services may reduce the difficulties faced by these students, as they enable them to become more confident. Post-secondary institutions provide a range of services: remedial programs, special classes, interpreting, note-taking, tutoring, real-time captioning and counselling (Petty & Kolvitz, 1996; Saur, 1992). The interpreting, note-taking, and tutoring services are widely used by students with HI, and they find that interpreters are important, especially if he or she is familiar with the specialized vocabulary used in specific fields of study (Degroot, 1997; Winston, 1995).

According to Scheetz (2001), note-taking in the classroom is vital to students with HI, so that they can recall the information presented by the professor in class. Saur (1992) also observed that note-takers need to highlight the important parts of the topic or themes discussed in the lecture, as well as record all new or difficult vocabularies, and organize the material clearly to present the information. Elliot, Stinson, McKee, Everhart, and Francis (2001) reported that, in general, they found the notes to be very helpful for students with HI.

Tutoring is another service offered by the support services, although it is perhaps not as widely used as the two services discussed above. Orlando, Gramly, and Hoke (1997) found that students with HI in higher education seek tutoring not only to improve their course grades and study skills, but also to improve their understanding of lectures, to enhance their reading and writing skills, and to clarify their class notes.

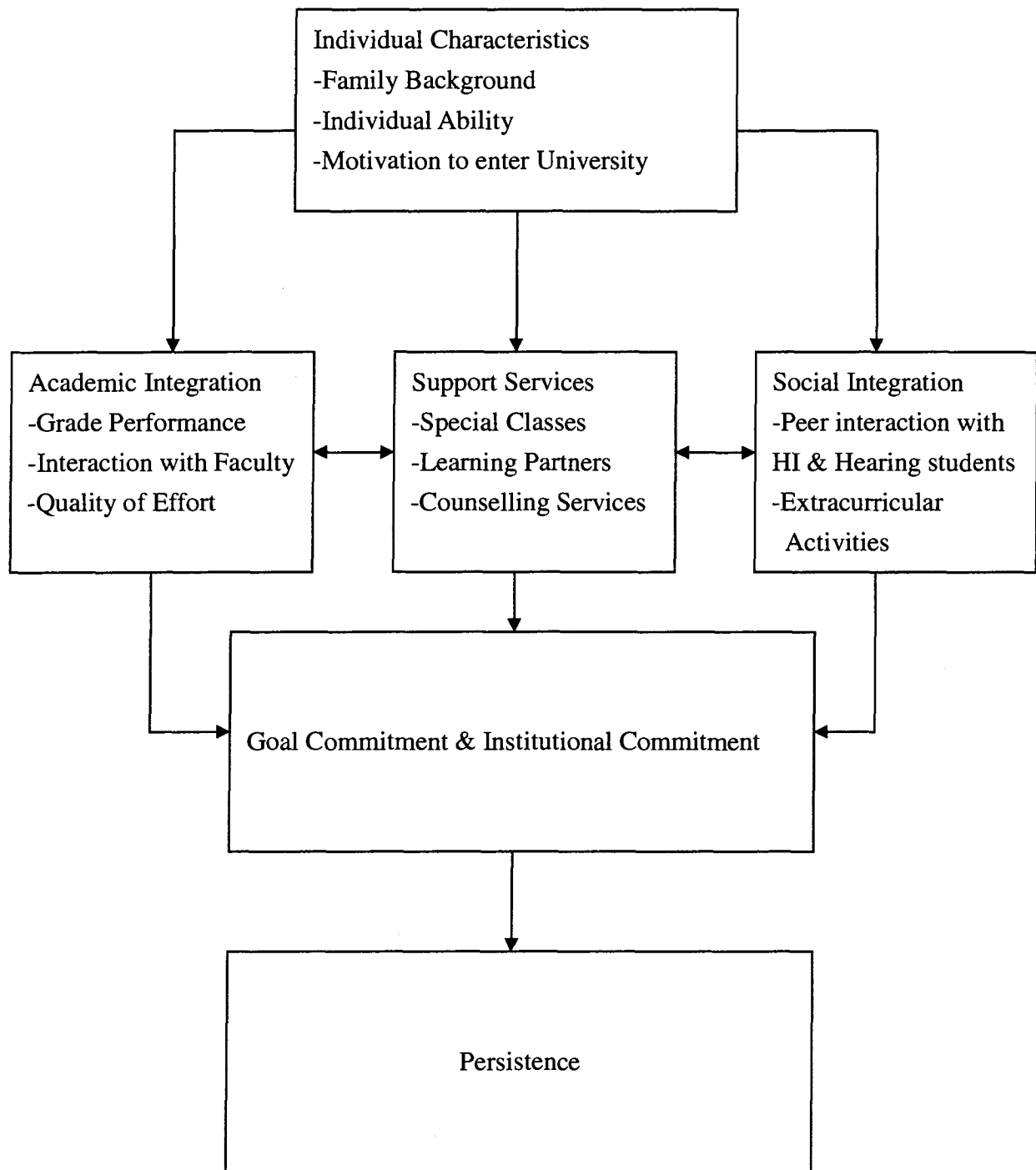
The support services only offer assistance and cannot guarantee that students will be successful in their courses. Petty and Kolvitz (1996) suggested that support services provide information and mentoring practices to empower students, so that they may self-advocate and have access to services they need for active participation in college and community life. Moreover, Lang (2002) suggested that further research is needed to examine the difference between the academic achievement of students who use support services and those who do not, and whether or not the use of support services promotes more active participation in the learning process and enhances academic success. So far, researching the effective use of support services to improve learning and academic achievement has not been explored and there is little published research concerning the support services for students with HI.

Conceptual Model

The conceptual model for this study on factors leading to the goal and institutional commitment of post-secondary students with HI and affecting their persistence is an adaptation of Tinto's (1993, 1997) model. This conceptual model includes three factors from Tinto's SIM: individual characteristics, academic integration, and social integration. The motivation of students with HI to enter post-secondary education was included in the category of individual characteristics. Motivation in this thesis is best defined as goal-oriented behaviour that is energized and directed by need or desire (Kleinginna & Kleinginna, 1981). The quality of individual effort is also included in the category of academic integration because as Tinto stated, the quality of student effort is more closely related to academic success than individual characteristics (Tinto, 1997). A fourth factor has also been added, that of the support services (e.g., special classes, learning partners, and Centre for Counselling Services). The model deriving from this conceptual model has

four main factors influencing the students' institutional and goal commitment and their persistence: individual characteristics, academic integration, social integration, and support services (see Figure 1).

Figure 1

Model of Persistence for Students with HI

Research Questions

The purpose of this study was to examine the experiences and factors contributing to persistence among students with hearing impairment in Taiwan. The following research questions guided this study:

1. What were the past and present educational experiences of students with hearing impairment enrolled in post-secondary studies in Taiwan?
2. What were the facilitators to the completion of their program?
3. What were the barriers to the completion of their program?
4. Why did these students persist in their studies?

This chapter provided an overview of relevant research on students in four- and two-year post-secondary institutions, students with disabilities, and students with HI. It also included relevant research on students with disabilities and students with HI studying at post-secondary institutions in Taiwan. This chapter addressed the role of the support services, outlined Tinto's integration model, and described the conceptual model that guided this study. Finally, this chapter set out the research questions. The following chapter will describe the methodology used to conduct this study in order to answer the above research questions.

CHAPTER 3

METHODOLOGY

The literature review in Chapter Two outlined the factors found in recent studies to influence withdrawal or persistence for post-secondary students. Research focusing on students with HI and their successful learning experiences in higher education is, however, limited. This study explores their learning experiences and the facilitators and barriers to their persistence with their studies. This chapter focuses on the methodology used in this study. It will describe qualitative research and explain the paradigm. This is followed by a discussion of the case study method and the procedures related to the recruitment of participants, access and consent, data collection, data analysis, and trustworthiness. The researcher's perspectives are also included.

Qualitative Research

This qualitative study investigated the experiences of successful university students with HI and the reasons for their persistence in their studies. Qualitative research examines “the meaning people have constructed about their world and their experience” (Merriam, 2002, p. 5). In qualitative research, researchers interpret the data inductively, gathering them in order to expand links and enrich theories, rather than deductively deriving hypotheses from the data, which then have to be tested. Qualitative research seems, therefore, more richly descriptive than quantitative research, as it provides words and pictures describing the experiences of the participants, rather than numbers, to convey a social phenomenon. Furthermore, this research methodology is particularly useful, as in this case, studies of individuals with disabilities, their families, and those who work with them, because it focuses on a participant's personal meanings, and thereby “gives voice to people who have been historically silenced or marginalized”

(Brantlinger, Jimenez, Klingner, Pugach & Richardson, 2005, p. 199).

Qualitative research encompasses several philosophical or theoretical orientations and designs, types, or genres of which phenomenology and case study were applied to this research. In phenomenological studies, the focus is on understanding how individuals create and understand their own life experience, and the researcher makes no assumptions about an objective reality that exists apart from the individual perspective (Bogdan & Biklen, 2003; Mertens, 2005).

Paradigm

A paradigm is a perspective of the world, composed of philosophical assumptions that determine thought and action (Mertens, 2005). Guba and Lincoln (2005, p. 192) identify four questions that help define a paradigm. The ontological question asks “what is the nature of reality?”; the epistemological question asks, “what is the relationship between the researcher and that being researched?”; the axiological question asks, “What is the role of values?”; and the methodological questions asks, “what is the process of research?”

This research was guided by a phenomenological paradigm. Mertens (2005) and Guba and Lincoln (2005) defined reality (ontology) as socially constructed, not objective. The researcher’s goal is to understand the multiple social constructions of meaning and knowledge in reality. The researcher and participant interact in an on-going process, in which the realities are created by the researcher and participants (epistemology). The values of the researcher, as a “passionate participant,” facilitated the articulation of the experiences of the participants (axiology). The phenomenological researcher opts for a qualitative, more personal mode of data collection, using interviews, observations, and document reviews.

In this study, in order for the researcher to explore and understand the multiple realities perceived by students with HI at a post-secondary institution and how they interpret their experiences, a phenomenological case study approach with a phenomenological paradigm seemed appropriate. This approach gave voice to the experiences of the participants.

Case Study Method

Case study is one of the research methods that seeks to understand complex social phenomena, to investigate the holistic and meaningful characteristics of real life events, to observe and obtain a true picture of society, and to organize a data system (Yin, 2003). Merriam (2002) indicated that case study is “an intensive description and analysis of a phenomenon or social unit such as an individual, group, institution, or community” (p. 8). Insights gained from such case studies may directly influence policy, practice, and future research. According to Creswell (1998), case studies are furthermore “an exploration of a bounded system or a case over time through detailed, in-depth data collection involving multiple sources of information rich in context.” A “bounded system” means “bounded by time and place,” and a case could be bounded by “a program, an event, an activity, or individuals” (p. 61).

The phenomenological case research used in this study applied a multiple case study approach in a single research site. The use of multiple similar and contrasting cases enhances the external validity or generalizability of the findings, and makes the interpretation of the study more compelling (Merriam, 2001). This research was bounded by “time and program,” which in this study was university life and the individuals concerned.

Participants

The participants in this study included students with hearing impairment, hearing partners, professors, and personnel from the counseling service (see Table 1). Nine students with HI were initially interested in this study, but one of them had previous university experience and consequently did not meet the requirements of this research. Another student was difficult to interview because she stated that everything was fine and would not open up and talk about her experiences in any detail, and as a result she was excluded from the study. Therefore this study included seven of the nine third and fourth-year students with HI who were attending a university in Taiwan, which had in total 26 students with HI. They were all full-time students without any previous college or university experience. Only one male student participated in this study. Two of the students had previously attended a regular high school, while five came from schools for students who are deaf. Three of them mostly used oral communication, and four of them used sign language, but all of them knew sign language and needed to use writing to enhance communication.

Their seven learning partners were also part of this study. Also included were four professors who had taught students with hearing impairment for at least five years, and two professionals from the centre of counseling services who had worked with students with HI for at least two years.

All the participants were recruited through the Centre for Counselling Services at the university. The recruitment text (Appendix D) was written in Chinese and posted on the bulletin board at the Centre for Counselling Services office. Cell phone text messages were also sent to students with HI to inform them of the study. No problems were experienced in the recruitment process. The researcher gave the students with HI a total

of \$60 each as compensation for their transportation costs for the three individual interviews, and gave \$10 to each learning partner for one individual interview. No compensation was given to the professors and personnel from the Centre for Counselling Services who were interviewed (see Table 1).

Table 1

Participants

Participant Type	Pseudonym	Gender M/F
Student (fourth year)	Annie	F
Student (third year)	Helen	F
Student (fourth year)	Jenny	F
Student (fourth year)	John	M
Student (fourth year)	Lily	F
Student (third year)	Maggie	F
Student (third year)	Wendy	F
Learning partner (fourth year student)	Annie's partner	F
Learning partner (third year student)	Helen's partner	F
Learning partner (fourth year student)	Jenny's partner	F
Learning partner (fourth year student)	John's partner	M
Learning partner (fourth year student)	Lily's partner	F
Learning partner (third year student)	Maggie's partner	F
Learning partner (third year student)	Wendy's partner	F
Professor	Professor A	M
Professor	Professor B	M
Professor	Professor C	M
Professor	Professor D	M
Personnel, centre of counseling services	Personnel A	F
Personnel, centre of counseling services	Personnel B	F

Research Site

The University site was established in 1955 and is located in northern Taiwan. It is an urban university and is convenient for commuter students. The university also offers residential accommodation for students from other regions, but most of the students commute. There are 14 departments and four graduate departments but only three departments accept students with HI, namely, those of fine arts, sculpture, and visual communication. The resource room offering support services for students with hearing and visual impairment was established in 1987, and it is run by the Centre for Counselling Services. The resource room offers support with academic and campus life, learning partners, and guidance with regard to careers. The Centre for Counselling Services also keeps in contact with these students and encourages them to attend organized social activities and come for counseling, if required. The academic support includes Chinese and English classes in the first year of university, and meetings for faculty members and students with hearing or visual impairment.

The professors at this university are encouraged to be aware of the needs of students with HI, and to discuss those needs with the students and to make accommodations. The university offers one classroom with several computers and a printer for students with hearing impairment, and it is adjacent to the Centre for Counselling Services. This art university has accepted students with hearing impairment for more than 20 years. When I was collecting my data, there was only one student with visual impairment in the music department, and 26 students in total with hearing impairment enrolled in the university.

Access and Consent

The University of Ottawa Research Ethics Committee reviewed and approved my research proposal, and I then presented it to the art university in Taiwan and received

permission to do this study at the university. I contacted the Centre for Counselling Services and asked to invite the students with HI to an informal meeting at which I presented my project and handed out the recruitment notices for those interested. During the meeting those interested were told to bring back the form to the Centre for Counselling Services at their convenience.

I then arranged another meeting with all the participants who were interested and described the study to them. They were asked to sign a consent form informing them of their rights and responsibilities as participants, including the right to withdraw from the study at any time (Appendix E). I spoke to the students with HI individually to schedule the interviews. I also arranged informal individual meetings with the other participants (learning partners, professors, and personnel of counseling services) to describe this study to them and to ask them to sign consent forms. At these meetings I also scheduled their interviews.

Data Collection Procedures

Individual interviews were the primary source of data for this study. There were four data collection procedures (see Table 2), arranged in the following sequence: (1) semi-structured individual interviews, (2) observations, (3) focus group interview, (4) interviews with professors, hearing partners, and personnel from the counseling services. Data were also gathered through a self-reflective journal that was completed by the researcher throughout the data collection process. Each of these methods of data collection is described in the following sections. All interviews were conducted in Chinese. Transcriptions also were written in Chinese so that participants could verify them. Data analysis was also conducted in Chinese to ensure the accuracy of the findings. All of the data were then translated into English. The translation was verified by a

Taiwanese colleague who had lived in Canada for 30 years and was a graduate of the University of Waterloo.

Table 2
Data Collection

	Individual interview (HI)	Observations	Focus group interview (HI)	Other interviews
Purpose	To obtain information about participants' learning experiences	To gather information about their classroom and campus life	To gather additional information about their post-secondary experience	To gather information about reaction to working with students with HI
Participants	Students with HI	Students with HI	Students with HI	Learning partners; professors & personnel
Data collection procedure	Semi-structured interviews	Classroom and campus life observation	Group discussion	Semi-structured interviews
Data collection action	Audiotape & transcribe and self-reflective journal	Audiotape and transcribe and self-reflective journal	Audiotape and transcribe and self-reflective journal	Audiotape and transcribe and self-reflective journal
Frequency	3 times for each student with HI	7 times, each lasting two hours	One time with group	One time with each participant
Research question	# 2,3	#1,2,3,4	#1,2,3,4	#2,3,4

Individual interviews

The interviews followed the method outlined by Seidman (2006) in his phenomenological interviewing guide. He stated that "the researcher's goal is to

understand the meaning people involved in education make of their experience” (p. 11). In-depth interviewing is an important approach to collect these experiences and meanings for the participants. Seidman recommended three separate interviews with each participant, to (1) establish the context of their experience, (2) set the details of their experience within the context in which it occurs, and (3) to allow the participants to reflect on the meaning of their experience for them. In this study, each participant was duly interviewed three times in order to develop a sense of his/her post-secondary educational experiences. The interviews were in-depth, semi-structured and lasted about 90 minutes each (see Appendix H). They were tape-recorded and verbatim transcriptions were prepared after each interview, providing thick, rich data. According to Seidman’s suggestion, the interviews should be conducted three days to a week apart to allow the participants to reflect but not forget. I, accordingly, scheduled the interviews in this study to be three to seven days apart. The interview times were arranged according to the participants’ schedules. The interviews were held in a room in the Centre for Counselling Services. This room was quiet and small, and located on the second floor with only one window with an air conditioner attached, and the participants could not be disturbed or seen by other people.

The first interview focused on their past educational experiences from childhood until the present day, including their goals in entering higher education. The second interview concentrated on their post-secondary educational experiences, which included their academic learning and social life during these three or four years. The final interview focused on their successful experiences and their perspective on the facilitators for and barriers to the completion of their degree. All three interviews were conducted with one participant before moving to the next participant.

The individuals with HI were interviewed with a variety of communication methods, as three of them used the oral method and four of them used Chinese sign language, but they all also used writing to clarify the questions and answers when needed. Some of the students needed to be prompted by questions, while others were very forthcoming.

The learning partners, the Centre for Counselling Services personnel, and professors were also interviewed using semi-structured interviews (see Appendix G). Each of these interviews took approximately 60 minutes. The audio-taped recordings were transcribed in Chinese and the participants had the opportunity to approve the transcripts. No revisions were made to any of the transcripts.

Observations

Observation, as a method of data collection, takes place in the natural field setting, representing a firsthand encounter with the phenomenon of interest (Merriam, 2001). In this study, I was as unobtrusive as possible and my role was one of “observer as participant” (Merriam, 2001, p. 101). The campus observation lasted for one month – June – when most of the fourth year students had no classes (John and Lily), and as a result I mostly observed third year students (Maggie, Helen, and Wendy) and fourth year students taking elective courses with the third year students (Annie and Jenny). I asked the permission of the professor before observing the class. Some classes did not allow visitors because there were naked models. Classroom observation took place on seven occasions for approximately two hours each time. During these classroom observations, the activities and interactions among students with HI and their peers and professors were noted. I also observed two activities organized by the Centre for Counselling Services for students with HI, that lasted for one hour each. In addition, I observed the students with

HI in their residences, the convenience store, and cafeteria to record their behaviors on campus, which assisted the researcher in getting to know the participants with HI (see Appendix G). These observations are referred to as field notes in this study.

Focus group interview with students with HI

Focus group interviews are designed to explore the perceptions, attitudes, and ideas which emerge in the interactions among a group of people, in which each participant possesses experiences with the phenomenon under study, for example, members of a program, class, department, college, or university (Kelly, 2003). Group interviews may also help participants remember experiences or stimulate descriptions of events shared by other members of the group. Also, group interviews may produce rich cumulative and elaborative data, and the format of such interviews is flexible (Fontana & Frey, 2005). Focus groups are different from individual interviews in that the participants are able to explore their ideas through discussion with each other. The researcher typically has four to seven questions prepared for a session of an hour and a half to two hours. The questions follow an interview guide. The answers to the questions give rise to follow-up discussions in the group (Kelly, 2003).

The focus group interview for this study involved only the seven students with HI and was held in a quiet meeting room on the third floor, and has an oval table, so that they could all see each other. It was held after all the individual interviews were concluded. During the focus group interview, the researcher wrote down all discussion questions on the blackboard for clarification. Questions for the focus group were developed after the participants had completed their individual interviews (Appendix H). The discussions were audio taped and then transcribed verbatim. The participants had the opportunity to read and approve their own transcript.

Self-reflective journal

Taylor and Bogdan (1998) suggested that the researcher maintain a self-reflective journal during interviewing and observations. The journal should contain an outline of the topics discussed in each interview. This helps the researcher to keep track of what has already been covered in the interviews and to go back to specific conversations when he or she wants to follow up on something that the informant has said. Merriam (2001) suggested that researchers write their reflections immediately following each interview. These reflections should contain the perceptions and thoughts of the researcher, and notes on the behavior (verbal and nonverbal) of the participants.

The self-reflective journal allows the researcher to think about the process of data collection as well as to make a preliminary analysis of the findings. I maintained a self-reflective journal to record participant reactions during the interviews and observations that gave me a broad understanding of the phenomenon. Furthermore, I recorded my thoughts and feelings about the interviews and observations, and in this way attempted to reduce any bias that I might have brought into the situation. I used my reflective journal as one element of the data collection and analysis for this study.

Researcher's Perspective

As a former teacher of English to junior and high school for students who are deaf, and as a lecturer of special education to students with disabilities, including students with HI, and students without disabilities, at a four-year college in Taiwan, I have considerable experience working with students with HI. I am familiar with the challenges experienced by students with HI, and as a result I was comfortable in the university which was the focus for this study. I know Chinese sign language and was able to establish trust and rapport with the participants.

Data Analysis

Data analysis is “the process of making sense of the data. And making sense of the data involves consolidating, reducing and interpreting what people have said and what the researcher has seen and read – it is the process of making meaning” (Merriam, 2001, p. 178). In this study, the data analysis sequence was arranged according to four different data collection methods, and the data were analyzed adapting Merriam’s (2001) step-by-step data process.

Interview data, according to Seidman (2006), comes out of an exploration of the profiles of the participants’ experiences. The interview material is open to analysis and interpretation. Furthermore, within-case and cross-case data analysis of the profiles enabled me to thoroughly examine the transcripts and profiles and thereby articulate the experiences of the participants. When all the individual interviews with the participants and the observations had been transcribed in Chinese, I wrote page numbers and line numbers on the transcripts for easy reference, and I read and re-read each transcript and checked the text with reference to the tape-recorded interviews. For the within-case analysis, I found and marked interesting and significant statements and made a collection of them into one transcript for each participant. I translated these statements in the Chinese transcripts into English. Then I wrote the profiles, which was still written in the participants’ own words (see Appendix I), and added information from my field notes and reflective journal notes, which I had already translated into English. Then I rewrote the individual profiles in the third person, relating them to the factors used in this study (Figure 1).

I did a cross case analysis of the individual profiles to find the commonalities and differences among the participants with HI. Then, I revised the cross-profiles with the

focus group discussion transcripts, and added relevant material from my self-reflective journal. I also analyzed and summarized the transcripts from the interviews with the learning partners, professors and personnel from the Centre for Counselling Services.

Trustworthiness

Merriam (2001) states that validity (internal and external) is considered a strength of qualitative research. The basic strategies to enhance internal validity include: triangulation (research-collected data through a combination of multiple interviews, observations, and document analysis), member checks, and peer examination (Merriam, 2001, p. 204). The strategies to enhance external validity include: the provision of rich, thick description (providing enough description so that readers will be able to determine how closely their situations match the research situation, and hence, whether findings can be transferred) and the use of multiple cases to study the same phenomenon.

In this study, I applied triangulation through multiple data sources: observations; individual interviews with the participants who had HI and individual interviews with the other participants: learning partners, professors and personnel from the Centre for Counselling Service; the focus group interview; and my own self-reflective journal. I also used member checks, returning interview transcripts to the participants for their comments, suggestions, and revisions. My supervisor was my peer reviewer, who provided an external audit check of the research process. The data collected in this study provided rich and thick description, thereby strengthening the external validity of the results. This study used multiple cases to strengthen the validity and the generalizability of the findings.

Seidman (2006) includes a three-interview structure to enhance validity. This structure encourages the participants to re-visit their experiences in interviews conducted

three to seven days apart. This strategy also allows the students to confirm their personal accounts. This study used a three-interview structure to enhance the validity of the study. Specifically, the participants were enabled to make sense of their own experience, and I was able to analyze each participant's perceptions as the study developed.

Summary

To summarize, this qualitative multiple case study involved 20 participants, including students with HI, their learning partners, professors and personnel from counseling services. Four methods of data collection were employed: (a) individual interviews, (b) observations, (c) focus group interview, and (d) a self-reflective journal. All the above interviews and observations were transcribed and the transcripts were then verified by the participants. Individual profiles were compiled for the participants with HI, and these were cross-referenced. Multiple sources of data, member checks, peer review, provision of rich and thick descriptions, multiple cases, and a three-interview structure were conducted to ensure validity and reliability.

CHAPTER 4

PROFILES

In this chapter, each participant's profile is presented according to a revised version of Tinto's model of persistence among students with HI. There are four factors to be considered, namely, individual characteristics, academic integration, social integration, and support services. The profiles are summarized in Appendix J. The codes I, II and III refers to each of the three individual interviews, and the number following the code indicates the lines.

Annie's Profile

Annie (pseudonym) is a fourth year student with hearing impairment (HI). She was hit by a motorcycle when she was three years old. She injured her head and later lost her hearing. She had good oral ability and she spoke quite clearly. When I interviewed her, I did not need to write anything down to clarify what she was saying. She is the only hearing impaired member of her family. She communicates with her family using speech. She had worn a hearing aid since she was six years old. At the time of the interview she only wore a hearing aid in one ear and explained that she could not wear two hearing aids at the same time because it was uncomfortable. Annie was a resident student at the university.

Individual Characteristics

Family Background

Annie has two brothers, her father is a decorator, and her mother is a housewife. She recalled: "My mother forced me to talk when I was young. I remember that she would ask me to read the textbooks out loud when I came home after school. She would not allow me to go out to play. She would tape-record me to check that I spoke correctly,

and she would ask me to practise again if it was incorrect” (I/11). She added: “I did not like to speak at first, but I came to like it later, and I ended up speaking all the time. Because my mother forced me to speak, I think that my speech ability is much better than the other HI students, but it is a little muffled” (I/11). Annie mentioned: “I like to talk with my parents, and they like talking to me, too. They like to hear my opinions, and I like to express my personal opinion and reactions to them” (III/33). She added: “My parents and I have a close relationship, but it is not the same with my two brothers” (III/40).

Individual Ability

I was very surprised that Annie could speak so well. I found it hard to accept that she was a student with HI. She helped me as an interpreter when we had informal group meetings on campus (Reflective journal, 05/30/05). She was quite talkative, but she did not like to discuss private matters. She was more introverted than the others, and she admitted that she was not studious. She stated many times that “I have a short attention span, and as a result I do not study hard” (III/47).

Pre-University Experience

Kindergarten learning experience

Annie described her worst memories of kindergarten: “I don’t have good memories of my kindergarten years with my hearing classmates. They pulled my hair and destroyed my art work, and I cried. When I went home, I told my father. He became angry and argued with the teachers so I transferred to another kindergarten” (I/5).

Primary school learning experience

Annie attended four different primary schools and each was a different learning experience. She stated that “my grade performance was good in the first and second

grades, but not good in the third grade, because I did not understand what the teacher was teaching. My father became impatient and scolded me, because he would explain things to me many times, but I did not understand” (I/10).

She attended a special class for pupils with HI in the fourth grade, because her hearing aid did not help her at that time. She stated: “Studying was so easy in the special HI class, because we had learned the material before in the regular class” (I/12).

She returned to the regular class for one semester in the fifth grade, because “the teacher found my academic performance to be excellent. She suggested that I transfer to the regular class” (I/12). However, after the transfer Annie noted, “My academic performance was bad, because my academic level was far behind my hearing classmates, and I couldn’t catch up. I felt so stressed and disappointed, and did not want to go to school, and stopped wanting to speak” (I/13). After one semester in the regular class, she went back to the special HI class, because her academic performance was too poor for the regular class. Annie mentioned, “The teachers used sign language in the special HI class, which slowed down the teaching process compared with the regular class. I felt that I had studied the subjects before, and as a result it was easy for me. I only spent one hour a day doing my homework, and I watched TV most of the time” (I/14). She also remarked, “I used sign language to communicate with my classmates, because they did not know what I was talking about, but I spoke with the teachers” (I/16).

Junior high and high school learning experience

Annie studied at a school for deaf students in junior high and high school. Older classmates with HI informed her: “That school is good” (I/19), and that many students went on to study there, and that is where she went. After one year, she found that “the smart older schoolmates had already graduated, and only the less intelligent ones were

left” (I/19). She commented:

My first year was streamlined into four classes, and I was in the lowest class, with a bad reputation for academic performance. There were only two girl students in our class. The textbooks were really easy, because they taught grade 5 or 6 primary level. It was too easy for me. I remember one time I got 100% in the test even though I had not studied. (I/20)

She transferred during the second semester of the first year into the highest level class, which used speech. They used the same textbooks as the hearing students, and she found it “difficult, and there were many smart pupils in the class, with whom I competed academically. Sometimes I came first, second or third in the class” (I/21). She described her study habits: “I felt that I only studied hard half of the time, and I was otherwise lazy. In the beginning, when I came home, I would do my homework first and only then watch TV. After a while, I would watch TV first and postpone my homework until later” (I/22). She compared the school for students who are deaf and the regular school as follows:

In general, the teachers teach easy and simple subjects in school for students who are deaf, and as a result I had a lot of time to read other books and do my own thing. But I spent so much time watching TV that I felt guilty about it. If I had the choice of junior high school again, I would choose to study in a regular school, because regular schools teach more material, and the pupils need to study hard. As a student with HI, I would need to work hard to keep up, and would develop better study habits in a regular school. (I/23,24)

Annie observed that she did not have any difficulty studying in high school, “I only needed to memorize the contents of textbooks, and practice and review, and follow the teachers’ instruction. That was always enough” (I/36). When she was asked whether she

had many friends in the school for students who are deaf, she replied: “I had few friends, and they were classmates, because I always stayed in the classroom. I did not want to know anyone outside the class” (I/35). She also mentioned, “There was one classmate with whom I spent a lot of time. We both lived in the dormitory in the last year of high school. We shared the same room and studied together” (I/32). She added: “I have not had any hearing friends since I was in primary school, because I do not like socializing with others” (I/38).

Annie appeared to be intelligent and has good oral ability. She also has a positive relationship with her parents, who hold high educational expectations of her. She had progressed academically despite having attended many schools and at times displaying poor work habits.

Motivation to Enter University

In high school, Annie heard that the government was offering university scholarships for students with HI, and this really appealed to her. She said: “I decided to go into the highest level class, which prepared pupils for university” (I/25). She mentioned that they used the same textbooks as hearing students, but the teachers taught quite slowly. She compared her textbooks with those used in lower-level classes, and found that they used more simple textbooks. This made her feel that she “had chosen the right class” (I/27).

Apart from the incentive of scholarships, she wanted to go to university because “the teachers also told us that we could learn many things at university” (I/26). She observed, “The teachers wanted us to go to university, and as a result they forced us to study during the summer and winter vacations in the last year of high school. They would get angry if we did not show up” (I/29). The teachers taught for free during the vacation. She

described her learning experience in high school: “I felt that I had to study hard by myself outside the classroom. I studied and studied in the second and third years of high school” (I/29,30). Annie lived in the dormitory in the last year of high school in order to have more time to prepare for the entrance exam, because it took an hour to commute to school. Annie had studied art since she was in the primary and junior high school, but the high school also taught basic art skills to students who wanted to take the examination to enter an art university.

She also worried about whether she could pass the entrance exam, “Sometimes I felt stressed and cried, because I was afraid and worried that I could not go to university. I was also worried about failing the entrance exam, and what I would do in the future if I failed” (I/33). She never told her parents that she felt stressed, because “I thought that it was my problem” (I/33). Her parents encouraged her to go to university, and she said her mother told her, “As long as I tried my best, it didn’t matter if I did not get into university” (I/33).

In summary, Annie was motivated by the possibility of a university scholarship, and was influenced by the encouragement she received from her parents and teachers. This led her to spend a lot of time studying in her last two years of high school in order to pass the entrance exam.

Academic Integration

Grade Performance

Annie entered an art university that is known for its program for students with HI, because “I knew many students with HI who had studied there” (III/14). She added: “I entered the fine arts department, which was my first choice” (III/16). Her academic performance had been “between 75% and 85%” (I/42), and she indicated that “I have not

studied hard enough, and I feel that university is not difficult if you study hard and have good study habits” (I/42).

First and second year grade performance

She recalled her first year: “I had difficulties with learning because the professors spoke so quickly, and I did not understand, and I had to rely on my learning partner to take notes for me in class” (II/3). She observed:

I was used to a different learning style in the school for students who are deaf, and as a result I found it hard to adjust to a new learning style when I first came to university. At university I have to learn and study and search for information by myself. The school for students who are deaf would give us all the necessary reference material. (II/8)

She also mentioned, “When I handed in my first essay assignment, the professor told me that my assignment was not an essay. I had to ask other classmates and my learning partner to help me. I did not know what an essay was like. I assumed that an essay was the same as a high school reflection assignment” (II/4). Her grade point average was 83% in the first year and she won a 40000NT (\$1300CDN) scholarship.

Annie did not devote much time to studying in her second year of university, and her academic average fell to 79%. She started to skip classes in the second semester. She stated, “I skipped morning class in the second semester, and I only showed up in the last class to hand in my assignment. In other courses, if I found that the professor did not check the student attendance, I would skip the class immediately” (III/3). When she was asked why she skipped class, she replied, “That’s personal. I am also lazy” (II/7). She also added that, “my learning partner skipped class, too” (II/7). She observed, “I skipped class when I was in high school. I would pretend I was going to the washroom, and would

come back half way through the class” (II/16).

Third year and fourth year grade performance

Annie had no learning partner in the third year of university. She also did not pay attention to her studies and skipped classes in the first semester. She said: “There was no learning partner to take notes for me, and I daydreamed or took novels to read in class” (III/2). She added: “I asked my classmates for help if there was a test coming up, or I borrowed notes from another student with HI who had a learning partner” (III/2). Annie failed one course in her third year. She observed, “I was not interested in that course and as a result I failed it, but this was compulsory course, and my grade was below 50%, which meant that I had to retake it” (II/15). She said: “I was depressed for one year, because of personal problems, and that was why my academic performance was bad. It got better in the second semester and I started to study hard” (III/4). She started to worry about her future, because there was not much time left for her at university, and as a result “I studied harder than I did in the first year, and I also worried that I would get a low-level job. I decided that I had to study hard” (II/26). Annie was busy doing her graduation exhibition work in the fourth year, and she was also preparing to take the graduate school entrance exam.

Interaction with Faculty

Annie mentioned, “I seldom asked the professors or even my learning partner questions, but I would ask other HI students if they were the same class as me” (II/32).

She also stated, “University is like a small society, and you need to work by yourself. Some of the professors do not teach well, because they always read from their lecture notes. Most of the professors use a question style when they are teaching” (II/24). When she was asked whether overheads would help students with HI, she responded: “I feel

sleepy if I see too many overheads” (II/19). She observed: “Some of the professors are concerned about students with HI and treat them well, but the others are all the same, and do not care if you are students with HI or not” (II/23).

She recalled that in one oil painting class, the professor would “criticize everyone’s art work severely, and the atmosphere was very tense in the class. It made me lose my confidence. We needed to hand in our work every week, so the professor could criticize it and suggest how to improve it. This teaching method taught me how to produce better work in the second year. I feel that I have learned a lot from that course” (III/11,12).

I observed another professor soliciting student response to art projects. Sometimes he would have to point to a student to get a response. Annie was sitting beside her learning partner in the second row, in the middle of the class. The professor noticed Annie pointing at the picture, and the professor asked her learning partner what Annie was asking. Annie asked: “Why is this art project all in pink?” The student who did this art project answered her question (Observation, 31/05/05). The professor knew in advance that I was going to observe Annie in his class, and he probably paid attention to her because I was there (Reflective journal, 31/05/05).

Quality of Effort

Annie said the following about the quality of her effort: “I have not studied hard at university. I would study harder if I could start all over again” (II/20). She described her study habits thus: “I do my assignments or fine art projects at the last minute. I don’t do all the preparation required at university. I get very nervous before the work is due, and if I have not finished it in time, I have to stay up all night. I think that all students have bad study habits like this” (III/42). She also competed academically with other students with HI in private: “If other HI students’ academic grades are better than mine, I feel

uncomfortable, especially if we're in the same class. I try to understand why their mark is better when I have studied hard. Perhaps I have just not studied hard enough. If their academic grade is better than mine, I re-think my study habits" (III/48). She made the following comments: "I think that studying hard is important in university, because you can learn many things. If you don't study hard, you waste your time when you come to class" (III/50). She also mentioned, "I only study hard 40% of the time, and I pay attention to my work 30% of the time. I am not interested in studying and I only study hard at the beginning" (III/50). She also made this comment about herself: "If I keep studying hard, how could I fail to pass the entrance exam for graduate school?" (III/50)

She described how she coped with stress, "If I am in a bad mood, I always play computer games to make me feel better. I get tired of using sign language to chat with HI students, so I seldom communicate with HI students when I am in a bad mood. When I feel over-worked, I skip class and go for a walk" (III/27,28). She also made this excuse for skipping classes: "The professors know that sometimes I do not show up, and my learning partner doesn't say anything to me about my skipped class, because I don't skip many classes. I show up for important classes, and only skip a class if it is not important. I skip more classes than other HI students" (III/30,31). She mentioned, "Junior students with HI know I skip class and criticize me for it when we meet on campus" (III/31). She also stated that she had only failed one course at university.

I met Annie and Jenny (another student with HI) in the school grocery store buying bread at 2:45 pm one afternoon. I told them that I was intending to observe their 3:00-5:00 pm class. They seemed nervous and told me that both of them were skipping class at that moment (Observation, 15/06/05). I then wondered how truthful Annie had

been when she said that she did not skip many classes.

In summary, Annie found that studying at university was very different from studying in high school, but she still did not put a lot of time and effort into her studies. She skipped some classes and got low marks. She seldom interacted with professors or asked questions. She started to study harder in the second semester of her third year.

Social Interaction

Peer Interaction with Students with HI and Hearing Students

Annie stated, “All of my friends are HI, and that includes university and outside friends. They can all speak like me. I do not have any hearing friends, because I am not interested in making friends or having relationships. Many people think that I am cold and have no facial expressions, and find it difficult to get on with me” (I/38). She also mentioned that it is important to interact with other students with HI at university:

I think that it is important for me to have the support of friends with HI to help me finish university. There are more students with HI in this university and we can help each other. Senior students with HI talk to us and make suggestions about choosing courses, and even say which subjects are easier and which are more difficult. I heard that there are few students with HI in other universities, and they often fail courses or drop out, or defer their graduation. This is rare at this university, although some students with HI intentionally delay their graduation so they can retake failed courses. (III/33, 34)

Annie mentioned that she did not put any effort into making friends and maintaining friendships. She would have liked to have made friends with more HI students, because, as she stated: “Communication is easier with us, and our thinking is almost the same” (III/34). She added, “I often interact with HI friends using cell phone messaging or

chatting on MSN. We usually chat about movies, games or art” (III/36). She mentioned that she felt that she could not join hearing groups: “I have communication problems with hearing students, because they speak quickly and I can not keep up and understand them. I think that they are speaking at a normal speed” (II/29). She seldom chats on MSN “with my learning partner and hearing classmates. The hearing classmates learn more and get more information than HI students. Sometimes I understand the words they say, but not what they mean” (III/35).

I observed Annie eating bread alone at break time. I saw her writing something on paper and giving it to a male hearing classmate sitting next to her. He wrote back to her, and Annie pointed out something on the paper to make sure she understood. (Annie was smiling at this hearing classmate). I later asked him what Annie had written to him, and he told me that she had asked about a student faculty meeting, and she wanted to make sure whether all the western art students needed to go (Observation, 31/05/05). This incident showed that Annie actually did communicate with hearing students through written notes instead of speech, although she said she did not. I overheard one hearing student asking to borrow a copy card from Annie, but she did not know that Annie was a student with HI. Annie understood what she was asking, and gave it to her without saying anything (Observation, 14/06/5). This incident showed that Annie could lip-read to figure out what was being said, but she did not want to respond using speech.

Extracurricular Activities

Annie only attended extracurricular activities for one semester in her second year: “I joined a photo club with my learning partner and I also attended another club by myself. I felt it was so boring and no one talked to me, so later I stopped going. The club took place at the same time as my part-time work as a typist, so I could not go” (II/10).

Annie did not like to interact socially with hearing students. Her friends were all students with HI and they kept to their own group and did not socialize with others, because they found it easier to communicate with each other and could help each other. She only joined university clubs for one semester, and she found them boring.

Support Services

Special Classes

The university offers special English and Chinese classes for first year students with HI, and they hire teachers who know sign language. Students with HI and hearing students are taught English and Chinese separately. Annie observed: "They are good for HI students and lessen our load in the first year. I heard that the regular English class is difficult" (II/2).

Learning Partner

Annie had three different learning partners at university, and she described them as follows: "My first year learning partner seldom came to school, and as a result I changed to another learning partner in my second year. She got sick, however, and later dropped out" (III/2). She did not have a learning partner in her third year, because the previous two were not helpful. She had a learning partner again in her last year at university, and this one was really concerned about her academic work. Annie described her as follows:

My learning partner tells me that I need to study hard. She asks me which subject I find difficult, and suggests that I read more books and ask more questions. She thinks that it is not good for me to postpone studying until just before a test. She still sends file attachments via email to tell me what she thinks of me. She thinks that I still need to work harder in many ways, and it is up to me to decide whether I want to or not. I feel ashamed and hurt. (III/49)

Annie also mentioned that her learning partner continued asking her what she could do for her and she would reply: “Only do what you have to do as a learning partner” (III/49). She never asked for anything extra from her learning partner. Annie added, “We are more relaxed and comfortable with each other now. I seldom ask my learning partner if I have an academic problem, because I have usually forgotten about it by the time I see her” (III/49).

I observed Annie’s learning partner coming 20 minutes late to class. Before she arrived, I saw Annie take out her small personal notebook and write down something in it. She was constantly checking her cell-phone. She only looked at the blackboard for a moment, and continued to turn over the pages in her notebook. The learning partner arrived and they passed notes back and forth (Observation, 31/05/05).

The Centre for Counselling Services

When she was asked whether she went to the Centre for Counselling Services for help, she described her experience as follows:

I seldom go to the Centre for Counselling Services, because I got a bad impression of the counseling teachers when I was in junior high school. Those teachers would say they would do something but not do it, and this was a ridiculous service for students. I have never liked the Centre for Counselling Service since then. I never tell the counseling teachers what is really going on. I did not bother to contact the Centre for Counselling Services in my first and second year of university. They changed counseling teachers in my third year and I did tell them a bit more about my learning partner problems. (II/11)

She added, “I never came to the Centre for Counselling Services to request help for my personal problems because I did not like it there” (II/17). However, she observed: “I *would* attend their activities if they offered food” (II/13).

The Centre for Counselling Services offers an informal seminar for all students with HI, and they provide a meal for the students with HI who attend. They invited one man who was hard of hearing to speak to the group. He had graduated from this university and was now concentrating on art design. He came to the activity to teach students with HI how to invent and design. I saw Annie and Lily sitting together, and none of the students with HI seemed to be interested in this topic. Annie and Lily chatted in sign language with each other and did not pay any attention to the instructor’s speech. The interpreter was disappointed that the students with HI were not interested, and told me that the university had much to offer them in learning opportunities, but they did not want to learn. The instructor asked if there was a student with HI who was good enough at Chinese to help him organize and paraphrase his speech. The sign language interpreter said that Annie was best at Chinese, and as a result Annie was selected to help the instructor and she started to pay attention to what was on the blackboard, and Lily helped her (Observation, 10/06/05). This incident showed that Annie has the best oral ability among the students with HI. However, that activity was boring to students with HI, because it seemed too much like a class lecture.

Annie did not make much use of the support services, even though two of the learning partners did not help her much at university. Annie did not have a close relationship with her last learning partner, because she felt that she was too critical of her work habits.

Goal Commitment and Institutional Commitment

Annie mentioned that a university degree is important to students with HI: "Having a university degree is important, because it makes it easier to find a job. HI students can only get low paying jobs if they do not have a university degree" (III/18). She added,

I think HI students become smarter if they study at university. For example, most of my high school classmates are unfamiliar with computer technology. HI students at university need to know how to use a computer for their essay assignments, and they have to use the internet and MSN. (III/41)

Annie described what she thought of this university: "I like this art university, and the professors and classmates are mostly good. The main problem is that I don't resolve my problems immediately, and they get harder to sort out later" (III/1). She mentioned that this university was her only choice, because she was good at art: "If I were to choose my university again, I would still choose this art university, because I only know how to draw, and I like drawing. This university is famous for art" (III/6). She added: "If I had not got into this university when I did, I think I would have taken the entrance examination again in the following year" (III/14). She also observed that she had been interested in art since she was young, and she stated "I am good at art, and some teachers and professors have praised me at high school and university. They have told me that I am good at colouring" (III/9,10).

Annie observed: "I do not study hard enough. I am still satisfied with my academic performance, even though I have not worked consistently hard. I only worked hard at the beginning" (III/47). When she was asked if she had ever considered dropping out of university, she replied: "I never even considered it. If I was stressed or had problems, I

would skip class and go outside and play. That was enough for me” (II/30).

Annie had definite career goals: she wanted to finish university so she could get a well-paying, stable job with good benefits. She really liked this university and was good at art. Thus, she demonstrated high persistence in her university studies, in that she did not drop out, but she demonstrated a low quality of self-regulation until the second semester of her third year.

Summary

Annie had diverse schooling experience, as she had attended several different schools and classes. She manifested the best oral ability of the participants. She did not pay attention to her studies and isolated herself socially at university, but she was self-aware and knew what she had to do and what was important for her. Her goal was to earn a university degree.

Annie mentioned many times that she only worked hard at the beginning of her studies, and not consistently. Although she did not work very hard, she still had future ambitions, such as applying for graduate school and finding work related to drawing. She thought that she was quite good in fine arts. She commented, “I think that the professors, my learning partner, classmates, and friends have helped me at university, and it is hard to say who helped most. If I could study again at university, I would learn more computer technology, skip fewer classes, and do fewer courses” (III/45). She added: “I would change my social relationships and make more friends” (III/44).

According to the model of persistence for students with HI (Figure1), Annie’s individual characteristics were as follows: she was self-aware, was goal-oriented as she wanted a good job, but she was not very hard-working. She had good oral ability, and her

parents had high educational expectations of her. She had experience in a regular class, in special classes for students with HI, and in a school for deaf students. She was good at art, and studied hard in the class that prepared students to enter university. Individual characteristics contributed to her persistence at university.

In terms of academic integration, Annie's habit of only working hard at the beginning meant that she only paid attention to her studies at the start of each semester, but did not make much effort later in the semester. Moreover, she did not have a helpful learning partner to assist her in her first year of university, and she seldom interacted with the professors. Hence, she was not wholly integrated academically.

In terms of social integration, Annie seemed shy with hearing peers and tended to restrict her social circle to individuals with HI. She did not make any hearing friends, even though she had good oral ability, possibly because she was self-conscious about the quality of her speech. She only attended extracurricular clubs for one semester, and did not make friends there. She did not involve herself in the social life of the university. She made some friends with HI outside the university, and their suggestions were a positive influence on Annie. Therefore, she was not wholly integrated socially into the institution.

Annie's academic and social integration were weak, and as a result she was not fully integrated into the university. Individual characteristics and her own strong goal commitment contributed to her persistence with her studies, and her successful graduation.

Helen's Profile

Helen (pseudonym) is a third year hearing impaired university student. Her parents are both hearing people. She has a brother who was born with HI. When her brother did not cry or respond at all to firecrackers, her mother took both of them to the doctor. He found that neither of them could hear. Helen always uses speech and writing to communicate with others. Her speech was not very clear when interviewed, and I had to pay close attention to her speaking in order to understand what she was saying. Helen was a commuter student in the university.

Individual Characteristics

Family Background

Helen often referred to her mother in the interview, and she told me that her father worked as an engineer in a factory and her mother worked for an association for the hearing impaired. She recalled, "My mother taught me to speak when I was young. I used to speak and write to communicate with others, but I would only speak with my family" (I/9).

I observed Helen and her mother at a career training information activity offered by the Centre for Counselling Services. Helen and her mother interacted frequently, and their relationship seemed quite close compared to most other students with HI and their parents. Helen and her mother mostly used speech to communicate with each other, but sometimes wrote things down. They often lip-read and sometimes smiled at each other during the activity (Observation, 16/06/05). I went to their table and talked to Helen's mother during the break. I remarked on the closeness of their relationship, and she replied that she had resigned her job in order to concentrate on taking care of Helen (Reflective journal, 16/06/05).

Individual Ability

Helen was open-minded and articulate, and she talked a lot about herself. She was able to hear quite well because she had a cochlear implant in her right ear. As a result, she said: “I can now hear and feel much better than before” (I/5).

*Pre-University Experience**Kindergarten learning experience*

Helen attended speech classes when she was young: “As a child, I practised speaking with other HI pupils in a speech center for three years, and spent one more year in the kindergarten with hearing pupils” (I/7). In the center, the teachers paid attention to her, and as a result: “I spoke a lot, but in the kindergarten the teachers paid little attention to me” (I/7). She also mentioned: “In kindergarten, my mother started to teach me words, and I liked to watch cartoons on TV and read story books, especially those with lots of pictures. I started to like drawing pictures at that time” (I/15).

Primary school learning experience

Helen attended a regular primary school, which had a resource room to help students with HI. Chinese and math were taught in the resource room, but her other classes took place in the regular classroom with hearing classmates. She recalled: “I talked and played with hearing classmates and they understood my speech” (I/17). Helen’s academic performance was poor in primary school, and she thought it was “probably because I could not hear very well” (I/18). Helen recalled: “My teacher persuaded me to enter a drawing competition, because he knew that I had had private art lessons” (I/18).

After that, she often entered drawing competitions and won many prizes. Helen mentioned, “I liked to draw and enter competitions, so I did not pay attention to my academic work” (I/20). Her mother “really cared about my work and was strict with me.

If I had a question about the academic work, I would ask my mother or brother” (I/21).

Junior high and high school learning experience

Helen entered a junior high school that provided a resource room. Chinese, math, English, and science were taught in the resource room. Helen remarked: “The resource room teachers only offered us help. We still had the same text books and exams as the hearing students” (I/22). She described her experiences: “My grade performance was poor because I could not hear. We had three HI students in our class and I often played with them and did not study hard, and as a result my academic performance was poor” (I/24).

Helen attended a private high school that offered an advertising design program. There was no resource room. There were only two other students with HI in the same grade, and both of them were placed in different classes. She stated: “I improved and learned a lot in high school, because I was with hearing students. I spoke and wrote to communicate with my classmates, and took down notes in class” (I/26). She also added: “I was so happy in high school, because all my classmates were nice to me and helped me. My academic performance improved a lot and I was above average in the class” (I/28).

Helen had three or four good friends, who usually helped her and talked to her on a frequent basis. She recalled: “In the first year, I only had one friend, because I did not know the other classmates. We played together at recess, and I was able to become part of her group of friends” (I/36). She added: “If I had a question, they would help me, and we usually went out and did graduation exhibitions together” (I/36).

Helen did not take part in any extracurricular activities, other than entering drawing competitions. She won prizes in school competitions, but not out-of-school competitions. She mentioned that “Everyone at school knew that I was an HI student, because it would

be announced whenever I won anything” (I/37).

Helen’s personal characteristics are positive, as she is outgoing and optimistic by nature. She has parents who are very concerned about her education. She was educated in regular schools and her marks were below average. However, she enjoyed positive peer relations and showed promise in visual art.

Motivation to Enter University

Helen wanted to study at university because her brother, who had only graduated from high school, could not find a job. Later he decided to go on to university. Helen learned from his example, and “my parents and teachers also wanted and encouraged me to take the entrance exam” (I/29). Helen’s class focused on design and art subjects, which meant that “I needed to work on Chinese, English, and math on my own” (I/31). In order to prepare for the university entrance exam in the last year of high school, Helen went to the library to study the required subjects with another student with HI. She also “bought many reference books to read and practised questions which had shown up in the entrance exam before” (I/33). She added: “I would ask my brother questions, and he would tell me how to practise answering the questions. He helped me a lot” (I/33). Helen also had an art tutor in the last year of high school who taught her how to prepare for the art subjects in the entrance exam. She had heard about this art university when she was in high school, and remarked: “My mother and teachers decided that this art university was best for me, but I was afraid that I would not be accepted, because I had heard that many students fail to get in” (I/34,35). Helen was influenced and supported by her family, and this meant that she spent time studying and also worked hard by herself to prepare for the entrance exam.

*Academic Integration**Grade Performance*

Helen passed the entrance exam for this art university, and was accepted into the department of fine arts. Helen found that studying at university was a very different experience. She stated, “The teachers would tell us the important points before the exams in high school, but the professors do not do that, which meant that I needed to rely on myself and think for myself” (II/5). On entry to university life, she learned sign language: “I did not know that not all HI students speak, so I asked them why they did not speak, and they told me that they were lazy. I thought students with HI were all the same as me, but some speak and others use sign language” (I/13). She met a student with HI in her class, Wendy, whom she had known in junior high school.

First year grade performance

Helen’s grade point average in the first year was 78%, and, as a result, “I was awarded a scholarship of NT 20000 (\$75CDN)” (II/1). Helen stated: “My grade performance was poor in the first year, because I found some introductory courses difficult and I got bad grades, and as a result my academic average was low” (III/28). Most of her first year courses were introductory courses and she observed: “Psychology was difficult because I was with hearing students” (II/4). She found that “the fine art classes were OK, but the work is very difficult here. I learned the basic art skills in high school, but it is harder at university” (II/2). She attended the same classes as her learning partner. In the first year she stated: “She was nice and helpful, and she wrote down the important points that the teacher made and gave them to me to read. If I had a question in class, I would ask my learning partner. If she could not give me an answer, she would ask the professor in class for me” (II/4).

Second year and third year grade performance

There was more coursework and fewer exams in the second year. Helen's academic average was 79%. Her learning partner took different introductory courses, which meant that "we were only in the same class for fine art, and she was busy" (II/8). When Helen had a test, she would "ask the professors which topics were more important for the test, or borrow notes from my classmates and copy them. Wendy's partner would help me if she was in the same class" (II/6).

She described her experience: "I feel that this year was more difficult, because there has been much more work, especially in fine arts. Some professors would give us difficult topics. There were also more essay assignments this year. I needed to rely on myself. All the introductory courses were more difficult, and I had to study hard for the exams" (II/21,22).

Helen mentioned that her mother edited her essay assignments: "My mother has a university degree. I ask her to check my essay assignments before I hand them in. Sometimes she makes a lot of corrections. If the assignment is straightforward, such as a reaction paper, I hand it in without her checking it beforehand" (II/18). She added: "If I have a question about fine art, I ask my learning partner or classmates, because my mother does not understand art" (II/20).

Helen recalled one event that troubled her in the second year: "On the first day of the physical education class, I could not see the professor anywhere. I came across a student and asked her where we needed to go for this class, and she told me that she did not know. I found the announcement on the blackboard later, and worked out exactly where we had to go. I was so worried about it" (II/40). This incident showed that the students with HI felt helpless when they could not hear announcements which were being

made and as a result did not understand what was going on.

Helen obtained 81% in the first semester of her third year, which meant that “my academic average had improved, especially in fine art” (II/29). Her learning partner was seldom in the same classes, because she was taking primary teacher education courses. Wendy’s learning partner helped her instead. She mentioned that she had difficulty in two art courses: “The sketching professor was busy, because he was promoted chair of the department. He did little other than just speak in class. In another modern art course, the professor was different from the previous semester. The former professor would show pictures in class and write down details about the exam, but the new one did not” (II/30).

I observed Helen and Wendy watching a video about university activities in a room for students with HI. Helen wanted me to see the video, because it showed her winning a competition for poster design. I saw the dean giving her a prize on the platform and concluded from this that Helen’s art performance was very good (Observation, 15/06/05).

Interaction with Faculty

Helen mentioned that she would ask questions to the professor: “Sometimes I want to ask the professor questions in class, and my learning partner helps me by asking them for me, because she speaks clearly. When my learning partner is not in the class, I ask the professor questions after class” (II/13). She also mentioned:

The professors here are nice, especially Professor C, a fine art professor, who is really nice and helpful, especially to students with HI. After each class, he writes down for us the important points that he has taught in the class. Other professors do not do this, for they expect our learning partners to write everything down for us. (II/14)

She made the following comments about the professors’ teaching styles: “Every

professor has a different teaching style. Some fine art professors speak a lot and do not show pictures or explain what is involved in the tests” (II/48). She added: “I prefer it when professors use overheads to explain the material, or distribute written materials that help HI students” (II/48). Helen stated, “I seldom interact with the professors and only ask academic questions. I mostly ask my classmates questions, because I do not want to bother the professors” (II/49).

Helen also reflected: “I asked the professors more questions in the introductory courses than in the art courses, because I usually ask my classmates art questions. Wendy and I would go together to ask a professor questions after class if we did not understand what he had written on the blackboard. The professor would then realize that we are both students with HI” (II/35).

Quality of Effort

Helen thought that her academic performance was poor in the first year, and as a result, “my mother checked my report card and timetable and she told me why I got bad marks in the exam. She thinks it is disappointing that my academic average is lower than 80%, and tells me that I need to study hard” (III/29).

Helen described how hard she worked: “I spend a lot of time drawing and in the library, looking for books to help me with essay assignments. I feel stressed and worried, because drawing here is much more difficult than in high school, and we learn much more than in high school. This means I need to work much harder” (II/46). She added, “I feel stressed and under pressure, because there is so much work. It is hard for me, because I can not hear. Other people tell me how to do the work, but I do not understand them, so I do what I think will be all right and hand it in. Usually I pass” (II/52).

Helen was not satisfied with her fine art grade, and she complained: “My grade was

lower than that of my hearing classmates, because their work was much better. I think my work is better than Wendy's, but my mark was only one point higher than hers. I think the professor must have been biased" (III/5). She hoped that "my fine art grade will be higher this year" (III/5). She also remarked, "There is only one mark between us in the other subjects as well, but I feel we are on the same level in written exams" (III/6).

When she was asked how hard she studied, she told me: "I only study hard 70% of the time, and other 30% I spend shopping, taking a rest, on the internet and chatting in MSN. I could study hard for up to 80% of the time, but not 90%. I felt that I studied hard 80% of the time in my third year" (III/3,4).

Helen paid attention and studied hard, and her academic performance improved from year to year as a result. Her learning partner and her mother also helped her in academic work, and she sometimes interacted with her professors. She compared and ranked the professors. Helen put a lot of time and effort into her academic work, but she felt her art marks should have been higher.

Social Integration

Peer Interaction with Students with HI and Hearing Students

Helen found it difficult to make friends, because "we change classrooms after every class, and there is no time to talk. In high school we had a recess, and I had time to talk with my classmates" (II/42). She mentioned: "I have not made any hearing friends, because I feel that hearing classmates distance themselves from me. Apart from my learning partner, I have only socialized with other HI students, some of whom are in a different year" (III/26). She added, "It is important to have HI friends in university. We can help each other, because we understand each other. I usually interact with them in MSN or cell phone messaging" (II/45). She also remarked: "I still keep in touch with

hearing friends from high school, who are in different universities” (II/42).

Helen also stated that Wendy was her best friend: “Wendy and I take most of the same courses, which means that we can be together, but she relies too much on me. I try to help her as much as I can. We often discuss work in MSN. Wendy does not have much skill in fine art, because she didn’t study it in high school” (III/20). She added: “My other close HI friend, Maggie, is the same year, but in a different faculty. Sometimes she takes the same class as Wendy and me, and we have lunch together and discuss school work in MSN” (III/21).

I saw Helen and Wendy on campus when they were both chatting in the hallway. I went up to them and asked them if they were going to have lunch. Helen told me that they would go home first and have lunch near their home, because they lived quite close by and always went home together. She told me that they usually had lunch together and sometimes they met up with another student with HI (Observation, 06/06/05). I saw the two of them together so many times on campus that I concluded that they were best friends (Reflective journal, 20/06/05).

Extracurricular Activities

Helen never attended any extracurricular activities. However, she remarked: “I am on the graduation committee and have been busy in meetings” (II/17). Helen only interacted with students with HI on campus, especially with her best friend Wendy. She did not make any hearing friends because she found it difficult to interact with them, and neither did she join any university clubs.

Support Services

Special Classes

All students with HI attend in the first year special Chinese and English classes,

taught by teachers who can sign. HI and hearing students are taught English and Chinese separately. Helen made this comment about the special classes: "I felt that the English class was quite easy, but the Chinese class was more difficult, because it was taught differently from high school. I learned more in Chinese than in English, and I got more than 80% in these two courses" (II/9).

Learning Partner

Helen felt that it was important for students with HI to have learning partners at university, and she stated: "I need a learning partner because I am HI, but I did not want to bother my learning partner much, so I did what I could and only contacted her if I had a question, or I asked other hearing classmates to help me. Some of them were nice and would help me" (II/11). She commented on her learning partner as follows:

My learning partner has helped me to improve my academic grade. I prefer my learning partner to Wendy's, because mine tells me in MSN the important things I need to know, and she writes them down simply for me. Wendy's learning partner has helped me a lot, especially when my learning partner does not show up. Wendy's learning partner is smarter and writes down every detail in her notes for us, but she only takes responsibility for writing notes in class, and is not really concerned about my academic performance. (III/7)

The Centre for Counselling Services

Helen attended activities offered by the Centre for Counselling Services for students with HI in the first and second years. She mentioned that she attended more activities in the second year: "I often attended activities which the Centre for Counselling Services offered. I took on the responsibility of arranging activities for HI students, such as welcoming freshmen at the beginning of the semester, and organizing graduation parties

at the end of the semester” (II/26). She seldom attended activities in the third year, because “I was on the graduation committee and was busy in meetings every Thursday” (II/17).

Helen rarely went to the Centre for Counselling Service, because she thought that “I need to rely on myself in university” (II/37). She recalled that she asked for help once: “I had chosen one course, but it did not show up on the timetable. I went to the Centre for Counselling Services to tell them about the course not being on the timetable, and they phoned the office and asked them to add it to the timetable” (II/37). She never went to the Centre for Counselling Services about her personal problems, and she stated: “The teachers in the Centre for Counselling Services are nice, but I prefer to tell my mother personal things or feelings, because my family is more reliable and trustworthy. If I tell the Centre for Counselling Services my problems, they probably will not help me, but my family will listen to me and help me resolve my problems” (II/37,38).

Helen said that her learning partner was helpful for her academic work, but she did not rely on her learning partner much, and tried to learn by herself. It seemed that in her case the other support services were less helpful than her learning partner:

Goal Commitment and Institutional Commitment

When she was asked if she had ever considered dropping out of university, she replied: “I have never thought about transferring or dropping out of this university, because I do not want to have wasted my time here” (III/8). She added: “My mother would be angry with me if I wanted to drop out of university, and she would not let me do it” (III/10). Helen described other students with HI who had dropped out of university as follows:

There were six HI students in our year. One of them was kicked out, because

she had skipped too many classes and did not hand in assignments. Another student with HI became interested in physical education, so he stayed for one year and then dropped out. He wanted to go to another university which does not accept HI students, so he gave up and found a job. (II/54)

Helen described how she felt about studying at university: "I like studying at this university. I think that I am learning a lot here, especially in terms of maturity and outlook. My academic performance is also not bad, and I am learning better study methods. I can learn a lot of things at university" (III/19). She also remarked: "It is important to graduate from university, so that I can find a job quickly. I would like to work in comics because I like to draw people" (III/21).

Helen had a goal in sight: she wanted to earn a university degree and had career aspirations. She liked this university and was determined to persist and finish her studies.

Summary

Helen was a hard-working autonomous student. She was satisfied with her academic work at university, even though she experienced many difficulties and felt stressed. Helen observed: "Family support, my own efforts, and the encouragement of my friends have been important sources of support at university" (III/22). Helen considered family support to be especially important in her study life, especially that of her mother: "I think that I would not have been successful at university without family support. I think that my mother has had a significant effect on my life as a student. She is my teacher and friend, as well as my mother" (III/11). She added: "My own efforts have also helped my success at university, but I think I haven't studied hard enough. My learning partner has also helped me, but mostly I rely on myself" (III/13,14).

In terms of emotional support, she stated: "I have always spoken to my mother and

shared with her. I have seldom confided in Wendy, but Wendy has often told me her own feelings or emotional stresses, because her mother did not study at university. I have never confided in my learning partner, because she is busy at school, too" (III/25).

According to the model of persistence for students with HI (Figure 1), Helen's individual characteristics were as follows: she was optimistic, goal-oriented, had high personal motivation, and was independent. She also had talent in the area of art. Her family was highly supportive and held high expectations of her. She communicated mostly using speech, but also writing. She attended a regular school, and obtained speech training in her early childhood. She prepared and studied by herself for the university entrance exam, because her school did not offer classes for the entrance exam. Hence, individual characteristics helped her persist.

In terms of academic integration, Helen thought that she needed to study hard to overcome many difficulties and stresses. She did not get much help from her learning partners, which meant that she always studied by herself. Helen also tended to take the initiative and asked the professors if she had questions in the introductory courses. Hence, she was partially integrated academically.

In terms of social integration, Helen spent most of her social life with peers who had HI, and her best friend had HI. She did not make any hearing friends and did not attend any extracurricular activities where she might meet hearing peers. Therefore, she was only integrated into the social group students with HI.

Helen's academic and social integration was partial, but her positive individual characteristics, her family, and her commitment to graduation reinforced her persistence with her studies.

Jenny's Profile

Introduction

Jenny (pseudonym) is a fourth year hearing impaired university student. When she was two years old, she lost her hearing ability after falling down and injuring her head. All her family are hearing and she is the fifth of six girls. She mostly uses sign language with HI students and uses writing to communicate with others. She is attractive, and seemed to have a lot of things on her mind.

Individual Characteristics

Family Background

Jenny's father is a manual laborer and her mother, a housewife. Some of her sisters sign with her, but her parents do not know sign language. Jenny referred many times to her mother during the interview. Her mother had been really strict with her since she was young. Jenny recalled: "My mother was strict with me and asked me to practise speech when I was in kindergarten, but I was lazy and found speech difficult" (I/7). She remarked that, when she was in primary school, "I needed to study at home, and my mother only allowed me to watch TV for a little while. I seldom went out to play with other pupils, and so my mother played with me a lot in the park" (I/33).

I observed Jenny, her mother and one sister when they attended a career training information activity offered by the Centre for Counselling Services. All three of them were sitting together, but were not interacting. They were just sitting and listening (Observation, 16/06/06). There seemed to be some tension among them.

Individual Ability

Jenny wore hearing aids and mostly used sign language. Her signing was so quick that she sometimes needed to write it down for clarification. She was introverted and

seemed depressed. She was not open to talking about herself, and tended to give monosyllabic answers to questions. I needed to use probing questions to encourage her to talk more freely (Reflective journal, 05/06/05).

Pre-University Experience

Kindergarten learning experience

Jenny took speech training courses before she entered kindergarten, and she also studied at a kindergarten attached to a school for the deaf. The teachers were strict and “made us speak all the time” (I/7).

Primary school learning experience

She attended a school for deaf students and spent most of her primary and secondary education there. She learned sign language when she was in primary school and this meant that “I did not practise speaking much, and as a result my oral ability is not good” (I/9). Jenny recalled her school experiences: “My academic performance was bad before the third grade, and my mother often punished me. My math performance was very bad, but my Chinese was good” (I/10). She added: “I did not understand some teachers’ sign language, because they signed quickly and it was difficult to keep up” (I/11).

Her academic performance improved from the fourth grade on, because “the teacher taught well, and I became more mature and realized that I needed to study harder on my own” (I/12). Jenny read many books that her mother borrowed from the library, and “I often went there to read books, because the library is beside the school. I found that my Chinese ability improved, because I studied it at home” (I/13).

Junior high and high school experience

Jenny attended a junior high school for students who are deaf, and her academic performance was better than at the primary school level, because “I knew that junior high

school was more difficult and that I had to study harder” (I/15). She recalled: “My Chinese grade was 90%, because the teacher was nice and I was interested in the subject, and the teacher taught it in a way that made it easy to understand. When I found anything difficult, I would ask the teacher questions” (I/16). She added: “The English teacher was strict and she taught us for three years in a row, and we had to retake exams if our marks were not good” (I/17). Jenny remembered that she would go home with an older high school schoolmate, and they often talked and discussed many things together, even funny things and “she would tell me many things, and teach me study methods” (I/18).

Jenny observed: “My mother would get angry at me or scold me a little if my academic grades were not good. She always paid attention to me and was strict with me and my other sisters” (I/15). Jenny became used to studying hard at that school, and decided to stay there for her high school education. Her mother forced her to attend a class which prepared students for university, because “she wanted me to go to university” (I/19). Her English grade was poor because it was difficult for her, and “my English teacher sometimes used sign language and sometimes spoke, and I only understood half of her teaching” (I/24). Her Chinese was on the whole good, but she did poorly in the test, and “my mother found my test score and she was angry with me. I pretended not to hear her” (I/23).

Her academic performance improved in the second semester of her first year in high school. She studied harder, because “my mother forced me” (I/25). Jenny came fifth or sixth in a class of twelve students with HI. If she had questions, she would ask the teachers or other classmates with HI who were smart. She had studied drawing since primary school during the summer vacations. She came in second in a drawing competition while she was in high school.

Jenny seemed anxious and depressed. Her mother seemed to be a driving force in terms of academic performance, and Jenny chose to comply to avoid her mother's anger. As a result, Jenny's achievement in the school for the deaf was above average.

Motivation to Enter University

Jenny stated that she never seriously considered studying at university, and she only wanted to try out the entrance exam. Her mother, however, "really wanted me to study at university and forced me to attend the class which prepared for the entrance exam" (I/21). She added: "If I had not agreed to take the entrance exam, my mother would have been angry with me" (I/32). Her mother often asked her where she was going, and why she had to go out, and as a result: "I felt under pressure and did not want to go out anymore, and always stayed at home" (I/33).

Her class had to stay at school for the whole day to study academic subjects and practise art during the summer vacation of the last year of high school, and she felt that this "was helpful for the entrance exam" (I/28). When she took the university entrance exam, she thought that "I had failed it because I am not smart, but to my surprise I was admitted" (I/29). She remarked: "I was average in the academic and art sections of the entrance exam" (I/30).

Jenny obeyed her mother and studied hard to prepare for the entrance exam, and her mother was very happy that she had passed the entrance exam.

Academic Integration

Grade Performance

First year grade performance

Jenny found that studying at university was very different from studying in the school for the deaf. She remarked: "I was so nervous when I entered university, because

there are many essay assignments and tests” (II/1). She added: “I have a learning partner and she helped a lot. We took the same courses and usually studied together after class” (II/1). She furthered “My senior HI classmates would teach me how to write an essay” (II/28). Her academic average was 80% in the first year and she received a scholarship. She observed: “I studied hard and I would ask my learning partner or other classmates when I had questions” (II/2). She did not use speech, but communicated with classmates using writing. In her first year, she wrote only a little because she was not familiar with written communication and felt embarrassed, but she wrote more in the following years.

Second year grade performance

Jenny changed her learning partner in her second year of university, because her former learning partner majored in Chinese art and they did not have many of the same courses. Her new learning partner followed the same subject major, but was not taking the same elective courses as her. As a result, she was worried: “I felt it was difficult, and I was nervous when I was not in the same course as my learning partner. I asked my hearing classmates to help me, and they helped me by writing down notes for me” (II/18). Her academic average was around 80% in the second year, because one fine art course was really difficult for her. She remarked: “I needed to study by myself and rely on myself. My learning partner would help me by writing down what the teacher was saying, and I would copy it. I also borrowed many reference books, as my learning partner suggested, but I still found that course was difficult for me” (II/15).

Third and fourth year academic performance

Jenny obtained a grade point average of 80% in her third year of university. She found one art history course difficult, and she only got 60% in that course. She observed: “I did not understand even when I read the required books, and as a result I felt very

stressed” (II/23). She added: “My learning partner asked me to read the books and look at the slides being shown in class, but even my learning partner did not really understand what was being taught” (II/23). Jenny felt better in her fourth year, and “my academic average was over 80% in my fourth year, and I feel that there have not been any difficult courses for me this year” (II/25). She mentioned: “I think that I have studied hard, because I worry about failing courses, especially when I heard that senior HI students had failed courses” (II/27).

Interaction with Faculty

Jenny would ask questions of the professors if she did not understand, especially in art courses. She stated: “I would mostly ask the professors questions about art if I did not understand, and they would tell me what I needed to change in my work. I think that the professors are nice, especially Professor C, who is enthusiastic” (II/30). She mentioned: “I often asked professors questions in the second and third year when I did not understand the notes I had made in class. The professors would tell me what I should have written and I would change it” (II/20).

She also made the following comments about the art and introductory professors’ teaching styles: “The art course professors don’t talk much, as they show us a lot of pictures of art work” (II/37), but “the introductory course professors talk a lot, and my learning partner has to write it all down for me. I get so tired, especially when the professors talk a lot and I need to take down a lot of notes” (II/38).

Quality of Effort

Jenny felt stressed about academic work and was tired of studying: “There were many essay assignments in the first and second year. I also felt troubled about the tests, and I could only sleep a little because I was worried. I feel so tired and sick of studying,

and I do not want to continue to study in graduate school” (III/13). She added: “This work stress, combined with the pressure from my mother, made me lose my temper easily and I really wanted to be free” (II/41).

Jenny observed: “I have spent a lot of time on art, and have taken a lot of time to prepare for tests. I think that I have studied much harder than when I was at deaf school” (II/29). When she was asked what she felt about her performance at university, she said: “I am satisfied with my academic performance, and I have studied hard because I worry about failing courses” (III/22). She added: “I know if your academic grade is under 50% you need to take the whole course again” (II/27). She observed: “I don’t think you can afford to be lazy when studying at university” (III/22). Jenny felt that she needed to study hard, and stated: “I spend 70% of my time studying and the other 30% I spend going out to look around” (III/18). Jenny mentioned: “I rarely skip class because the professors keep an eye on their students. I am careful” (III/25).

Jenny felt nervous and tense about her academic work, and she spent time studying hard in order to earn good marks. She also asked professors more questions in art than in other subjects.

Social Integration

Peer Interaction with HI & Hearing Students

Jenny was not anxious on entering university, because there were other students with HI there, but “I felt nervous and ashamed when I met a lot of hearing students for the first time, because I couldn’t talk to them” (II/3).

Jenny considered herself to be shy when she met hearing students, and observed: “I only had friends with HI in the first year, but I started to use written communication with hearing students more after that” (II/3). She also mentioned that she had “lived in a dorm

for all four years of my university life. In a dorm I have many opportunities to meet hearing students, so I use written communication with them when we meet, especially when I need to find out anything important” (II/3).

She remarked, “I made a few hearing friends who are my classmates in my second year. My hearing classmates would smile at me when we met on campus and they knew I was HI, and some hearing classmates would communicate with me using writing” (II/16). She added: “HI and hearing students from my class sometimes go out together for class trips” (II/44).

She felt that it was important to have both hearing and friends with HI: “I think that it is not good to have only friends with HI. I think that hearing friends are important, because they can help me a lot. We need to make hearing friends as well, so we can interact with each other” (II/17).

Jenny stated: “I have friends with HI among younger students, as well as those in the same year” (II/34). She mentioned that Annie was her best friend with HI, and they were not only classmates at university, but had also been classmates in the school for the deaf: “We often take the same courses and help each other, even though she did not have a learning partner in the third year. I think that there should be more HI students attending university, because HI students can help each other” (III/8). She added, “When I feel stressed, I tell my best HI friend Annie and she encourages me. My hearing classmates are concerned about me when they see that I look depressed, and ask me if I feel tired” (III/11).

Extracurricular Activities

Jenny did not attend any extracurricular activities in her four years at university: “I’ve never attended any extracurricular activities in my four years of university life,

because I am always busy studying” (II/24). Jenny thought that it was important to make friends, and she made friends with hearing classmates and fellow students with HI. Her best friend was a student with HI. She did not get involved in any university clubs.

Support Services

Special Classes

The university offers special English and Chinese classes for first year HI students, and they hire teachers who know sign language. HI and hearing students are taught English and Chinese separately. Jenny made the following comments about these special classes: “I found that they were helpful. The English teacher in particular taught well, and my Chinese is still good, but I have studied Chinese by myself” (II/11).

Learning Partner

Jenny had two learning partners who helped her to write notes in class. She stated: “My second learning partner has helped me a lot and she works hard, writing down notes clearly. I shared my personal problems and family situation with my second learning partner, and I also asked her about her own family” (II/32). She added: “I use MSN to contact her when I want to ask her academic questions” (II/32). Jenny made the following comments about her two learning partners: “Both my learning partners have been good to me, and have been concerned about me” (III/12).

I observed Jenny’s and Annie’s art class and found that Jenny and her learning partner had a closer relationship than Annie and her learning partner. Jenny used sign language and sometimes wrote things down for her learning partner, but her learning partner mostly only wrote to her, except for simple signs, such as “I don’t know.” Jenny and her learning partner often interacted with each other during the class, sometimes chatting and smiling (Observation, 31/05/05).

I observed Jenny's class and saw her sitting beside her hearing partner. Both of them were chatting using writing. Her learning partner handed a game cube puzzle to Jenny and asked her to open it. Jenny tried several times and finally opened it, and her neighbouring hearing classmates clapped (Observation, 14/06/05). This incident showed that Jenny had a positive relationship with her learning partner and her classmates.

The Centre for Counselling Services

Jenny attended activities offered by the Centre for Counselling Services in her four years at university. She remarked: "There were more activities for HI and learning partners in the first year of university, and I always attended those activities" (II/10). After her first year, she was more busy, and said, "If I had had time, I would have attended the activities offered by the Centre for Counselling Services" (II/33). She added: "The Centre for Counselling Services post activities for HI students on the bulletin board and I go there and check the board, and tell other HI students what activities are being held" (II/33).

When she asked whether she had ever sought help from the Centre for Counselling Services, she replied: "I only asked for help once, when I wanted to change my learning partner in the second year. I did not ask for help about my personal problems, because they are my own problems, and I prefer to tell them to my best HI friend or learning partner" (II/33).

Jenny thought the special classes and her learning partner were quite helpful, but she emphasized that her learning partner had been particularly useful and supportive, and that they had established a good relationship.

Goal Commitment and Institutional Commitment

Jenny felt that studying at university was helpful for her future: "It is important to

study at this art university to get a good job. I want to find a career in design, but I don't know much about computers. I need to study hard and learn more" (III/5,6). She also mentioned: "I like this university" (III/3), and added: "If I could choose my university again, I would choose the same university, because it was my first choice of university and the fine art department was my first choice of department" (III/1).

When she was asked if she had ever considered dropping out of university, she replied: "I considered dropping out of university when I was in the first year, due to pressure from the professors and my family, especially my mother. She is too concerned about me and nags too much. I did not drop out, because she would have been angry. I felt I had to endure it and continue studying until graduation" (III/26). She added: "In my first year I would rather have been back in high school with all the HI students together. I suddenly had to get along with hearing classmates, and this was difficult for me. I felt stressed and did not adjust very easily" (III/27).

Jenny didn't consider dropping out of university after her first year, because "you change your thinking when you study at university. I thought that I needed to continue studying until I finished" (II/27).

Jenny felt it was important for her to get a university degree, and she liked this university. She persisted at first because she was afraid of her mother's anger, but at the time of her interview she considered that she persisted for her own reasons: to qualify for a well-paying job with good benefits.

Summary

According to the model of persistence (Figure 1), Jenny's individual characteristics are as follows: she was anxious, reluctant, and had little personal motivation and limited goals. These characteristics were likely because her mother had high expectations of her,

was controlling, and always pushed her to study hard. Although Jenny felt stressed by her mother, she thought that “she has been my most important source of support at university, because she has always pushed me to study hard, and she hopes that I will graduate from university. She will be angry if I do not” (III/28). Her pre-university learning experience was mostly at a school for the deaf and she studied hard in the class that prepared students to enter university. Hence, her individual characteristics influenced her persistence.

In terms of academic integration, Jenny showed anxiety and worry about her work, and so she spent more time studying. She also overcame difficulties and stress in her pursuit of a university degree. Jenny had worked hard and spent a lot time reading at the university level. She mentioned: “I have learned a lot in university, especially how to write essays, and I have often borrowed books to read” (II/28,29). She added: “I am, on the whole, satisfied with my academic performance” (III/22). Other factors in her academic integration included: the university support service and two helpful learning partners. She also showed initiative in asking the professors herself if she had art questions. Therefore, she was quite well integrated academically.

In terms of social integration, Jenny made friends with students with HI and a few hearing friends at university. She was shy and did not feel confident in making hearing friends. As a result she joined a group for students with HI and made her best friends there. However, she did not attend extracurricular clubs and did not make friends there. Hence, she had limited social integration. Jenny observed: “I think my HI friends are closest to me; then there is my family, which is quite close to me. My learning partner is further from me than my family, and there is a big gap between me and my hearing classmates” (III/14). She remarked: “This university has helped me, encouraging me to

develop independent thinking. Studying at university frees me, and as a result my mother has less influence on me” (III/29).

Jenny’ academic integration had a positive influence on her persistence, but her social integration was too limited for her to feel fully integrated into the university. Her goal commitment (graduation) reinforced her persistence with her studies and her goal of graduation.

John's Profile

Introduction

John (pseudonym) is a fourth year hearing impaired university student. He was born prematurely with a high fever, which damaged his hearing. All his family members are hearing people. He uses a total communication method that includes oral, sign, and writing to communicate with others. He was active and talkative when I interviewed him, and he always used oral communication when he talked to me, even though I know sign language. It was difficult to understand his speech, but he seemed to want to speak all the time. He was a resident student in the university.

Individual Characteristics

Family Background

John seldom referred to his family in the interview, and he told me that his mother is a housewife and his father works in a bakery. He has a brother and a sister. He recalled: "My parents forced me to speak when I was young and did not allow me to use my hands, so my parents used speech to communicate with me, but they spoke slowly" (I/4). I saw John and his mother attend a career training information activity offered by the Centre for Counselling Services. They interacted frequently, and their relationship seemed quite close compared to most other students with HI and their parents. John and his mother mostly used sign language to communicate and sometimes wrote. Occasionally, she reminded him to look at the blackboard (Observation, 16/06/05).

Individual Ability

John did not wear hearing aids because "they do not help because my hearing loss is so serious" (I/2). He still speaks to communicate with hearing people because "my sign language is good but my oral ability is worse now" (I/3). John is outgoing, optimistic and

talkative. When I interviewed him, he tried to talk a lot to me and he expressed his confidence and pride in his learning at university (Reflective journal, 05/31/05).

Pre-university Experience

Primary school learning experience

John described how he studied in the mainstream class: "We only used speech and lip reading. The teachers did not know sign language. I think that my oral ability was developed then" (I/8). John liked to read comic books and read a lot when he was in primary school. He also enjoyed the artwork in the books: "I usually went to the library to borrow comic books ... I was able to look at a lot of pictures and read the accompanying stories, so I think that reading comic books improved my Chinese" (I/9). His academic performance seems to have been quite good: "I did not feel it was difficult for me to study any subject, including Chinese and math ... I came third out of more than twenty students" (I/6).

He also described his experience of primary school: "I found that I was not very happy because the class atmosphere was not good. Pupils teased you if you were different because you could not hear, and sometimes there were fights" (I/7). John indicated that his parents were concerned about him: "My parents paid close attention to my studies and learning situation. They punished me when I behaved badly or did not study hard" (I/4).

Junior high and high school learning experience

John went to the school for deaf students for his junior and senior high school. He started to learn sign language. He told me why he chose to attend that school: "I did art when I was at primary school and I wanted to continue, so I entered a school for deaf students which offered art lessons" (I/5). He described his academic performance as follows:

In junior high, my academic achievement was not as good as when I was in primary school. I came in fifth in academic subjects ... My high school grade performance was bad, especially in English. Sometimes I got 20% or even less in tests, but I got good grades in art, and I came in first in art when I graduated.

I also took part in an art competition and came in fourth in the city. (I/12)

John seemed optimistic and his parents were very concerned about his education. Although his academic performance in junior and high school was not as strong as in primary school, he nevertheless demonstrated good art skills.

Motivation to Enter University

When John was in the second year of high school, he decided to enter university because he had a best friend with HI in the same class as him who wanted to go to university. This friend was the highest academic achiever in the class, and both of them taught each other. John taught her art and in turn she tutored John in academic subjects. In this way his best friend influenced him and encouraged him to study at university: "I only made one good friend, and we were in the same class in the school for students who are deaf. She studied very hard and got good marks. She always encouraged me to take the university entrance exam. We cheered each other up and taught each other" (I/33).

His academic performance was not good, and neither he nor his teachers had confidence in his abilities: "The teachers did not encourage me because my academic grades were not good, and the teacher thought that I would have difficulty passing the entrance exam" (I/17). John did not think that he could pass the exam, but he managed it: "It was a surprise for everyone that I passed the entrance exam and was admitted into the art university which I had as my first choice ... I think that I was able to pass because my art score was high, and they counted the art and academic scores together" (I/17, 21).

John was influenced and encouraged by his best friend to take the university entrance exam, and his good art performance helped him to pass the entrance exam.

Academic Integration

Grade Performance

As university studying is totally different from, and much harder than, studying in a school for students who are deaf, he has had to study hard at university: "I study hard and spend at least four hours a day studying, which includes my assignments" (I/24).

First year grade performance

John felt the first year of university was academically challenging, especially as most of the students were hearing students. John reported:

The first year was difficult for me because I was not familiar with campus life and knew very little about it, including how to learn at university. It took time to understand how to study. I felt very stressed and could not sleep at night and I felt I needed to resolve it myself, because my learning partner could not help with everything. (I/25)

The provision of a learning partner is one of the support services for students with HI, and the learning partner is required to be in the same classes as the student with HI. John stated that:

My first year at university was a big challenge for me. I relied heavily on my learning partner, who took the same courses as I did and always sat beside me. He wrote down the important points made by the professors and gave them to me to read. If I did not understand, I would ask him and he would write it all down again more simply. (I/26)

Although John found it initially difficult to adapt to the academic requirements of

university, he did not get good marks in his first year. He described the most difficult challenges for him as follows:

My grade performance in the first year was not good because I did not know the subjects well, and had problems writing essays, and there were a lot of essay assignments, (The school for students who are deaf never taught us how to write). I did not know how to write and whether I was doing the right thing. My learning partner taught me how to write and took me to the library and told me what books I needed to read to prepare for the essay, and who were the important artists. (I/30,36,37,38)

John's learning partner helped him finish his essays. He described the process in this way: "Sometimes I wrote half of the assignment and gave to him and he finished it for me, so he helped me a lot. He would then show me what he had done before I handed it in to the professor" (I/42). John also added that it was important that his learning partner would check his essay: "The professors did not understand my essays, so the marks were low and I needed my learning partner to edit my work" (I/42).

The first year was important to establish confidence in his learning skills. His learning partner was the most important person to help him. He added that: "In group discussions, my learning partner would help me and if I had a question in class, he would ask it for me" (II/38).

Second year grade performance

John claimed that in his second year his "academic grades got better, because my learning skills had improved" (III/38). His learning partner continued to help him when they were in the same classes, but the learning partners are not required to be in the same courses as their HI students after the first year. As a result John worried about the courses

his learning partner did not take: "I had problems when he was not in the same class as me, but I seldom asked other classmates for help because they haven't been trained in how to help students with hearing impairment" (II/15). John usually tried to teach himself when his learning partner was not in the same course: "I usually tried to study by myself, going to the library to find books or writing down the topic and searching on the Internet" (II/15,III/40). John mentioned that he was not paid any special attention as a student with HI: "Sometimes the students in my class did not notice that I am a student with hearing impairment. When things got difficult and I had a big problem in the course, I would ask my learning partner to help me even if he was not in that course. He would ask other hearing students to help me" (II/15).

His worst classroom experience occurred when everyone forgot that he is a student with HI. He described it as follows:

I remember something serious happened in one class. All the students were divided into two groups. I could not find my learning partner, so I felt anxious and nervous. I did not know what was happening. My classmates were all speaking and paid no attention to me. I did not know why we were dividing into groups and what each group was supposed to do. The teacher asked me which group I was in, but I did not know what was happening. One classmate eventually helped me and wrote the instructions on the blackboard. I felt so upset and helpless at that time. (II/19,20)

Third and fourth year grade performance

John was getting used to university life and he felt more confident in his learning: "I got used to studying at university and my academic work is good, but I still study hard, so I maintain an academic average of 80% or more in each semester and I am tenth in my

class. The hearing students are surprised that an HI student can get a good grade”(III/39). He had the same learning partner in the third and fourth years as he had in the first and second years. In the third year, his learning situation improved, as he stated:

I did not rely on my learning partner as much as before. I felt more confident studying. If I was not in the same class as my learning partner, we still used MSN to interact each other ... I still needed my learning partner to check my essays, but he only told me which part needed to be changed or to add more material ... After my learning partner had read and made suggestions, I rewrote it and gave it back to him to reread and hand in to the professor. Sometimes I did not ask him to reread it. (II/39)

Interaction with Faculty

John was the only student with HI in his year in the faculty of sculpture, and everyone helped him: “My classmates and professors help me, especially those in the faculty. My classmates help me do assignments, and even the faculty professors give me some guidance with assignments” (I/28,29). If he had a question, he would “either ask my learning partner to come with me or go by myself and use paper and pen to communicate with the professor” (I/26). He said that sometimes in class he would “raise my hand and tell the professor that I can not hear, so the professor would pay attention to me and address my learning partner directly” (II/6,7).

John had to take general introductory courses with professors from other faculties. He commented: “I never ask professors questions in the large introductory courses” (II/43). He added: “I am not satisfied with the introductory course professors’ teaching style. They do not pay any attention to me, probably because they do not know that I am an HI student. The professors do not adapt their teaching methods in class. They always

speak and only sometimes use overheads” (II/16). He feels that “overheads are better for HI students because they can see the information” (II/38).

Quality of Effort

John stated: “I spend at least four hours a day studying. When I saw hearing students studying hard and doing well they became role models for me. My learning partner is my most important role model”(II/34). He also compared his efforts in high school to those at university: “I think that I did not study hard in high school compared to how I study at university. There is not much competition in high school so I think that I did not study hard” (III/21). The government encourages students with disabilities by offering scholarships, and John thought that scholarships had been an important factor in encouraging him to study hard: “If my academic average is over 80 in one semester, I get 40000NT (\$1300CDN), so I study hard and get to keep my scholarship every semester, so I do not need to find a part time job” (II/34). He also mentioned: “My classmates tell me that I could get higher marks and more money, but I think that I try my best and that’s enough for me because sometimes I get tired” (II/35).

Studying at university is not easy for John. Although his performance is quite good, he commented that: “I feel stressed studying at university, not only in essay-writing, but also in sculpture assignments. In written assignments, my learning partner helps me a lot, but he cannot help me with my sculpture work” (II/40). John thought about how he decreases his level of stress: “If I’m under stress, I go out and this helps me to feel better. I seldom talk to others about my stress, even my family and learning partner, because I think I am an adult and I need to sort it out by myself” (II/41,42).

John described his learning experience, how to achieve good marks, and his learning attitude in class:

It is not difficult at university if you study hard. If you fail some courses or are kicked out of university, it means you did not study hard. I get my good marks from studying hard. If you pay careful attention in class and do not doze off, then you get 60% because the professors are smart and know who is performing well in class. Another thing is not to skip class because professors always know who seldom comes to class. (II/38,39)

John put a lot of effort into his academic work. His learning partner helped him considerably, and he was able to rely on his own efforts. As a result John's grades improved throughout university. He also took the initiative in asking professors questions in all his courses except for the introductory courses.

Social Integration

Peer Interaction with Students with HI and Hearing Students

John only had one good friend in high school, but he has made many friends at the university level. John took the initiative in making friends: "I like to make friends, especially among hearing students. I have 23 hearing friends at university, and they include males and females. We get together, go out for lunch, discuss courses and chat on MSN" (II/27/28). I observed him having lunch with his learning partner and other classmates in the school cafeteria (Observation, 06/14/05). John described how he interacts with them:

When I meet hearing classmates on campus, I just say hello to them if they are busy. But if they have time, I stop to chat with them, using pen and paper to communicate with them. I know that they all like me because I have fun with them and make jokes using sign language. They do not know sign language so I make them laugh. Sometimes I teach them sign language, and

they teach me to speak. I take the initiative in talking to them because that makes hearing students feel you are kind and generous. If you do not take the initiative, hearing students do not pay attention to you. (II/29,30,31)

John also compared making friends with HI and with hearing students: “I do not want to make friends with students with HI at university because hearing students have better thinking and I am on the same level as them. I like their competitive thinking, and they make me improve. I do not make friends with HI at university because they are sometimes self-centered” (I/27). He explained why he does not interact with students with HI on campus: “There are some students with HI from my high school here, but in a different faculty, and we seldom meet on campus and seldom interact. My thinking has changed a lot and we only talk about general things when we meet at students with HI activities” (III/15). The only good HI friend he mentioned in his interviews is his high school classmate, who attends the same university but in a different faculty. They have similar personalities: “My best HI friend is my former high school classmate. Although she is a student with HI, she is different from the other students with HI because she has confidence and determination. She studies hard and does not give up, so she is very successful” (III/14).

John’s attitude towards the potential for success for students with HI at university was displayed when he approached me on campus and asked if I had interviewed a particular student with HI. I said that I had and he made this comment about her: “She studies hard at university but she has not achieved higher grades than mine, because her learning method is wrong and her attitude does not show initiative, as she has few hearing friends” (Observation, 06/13/05). He added: “Her academic performance was quite good

in junior high school but it went down in high school” (Observation, 06/13/05). He also complained: “I met her and her mother one time on campus, and her mother knew that I am a student with HI and told her not to spend time with me” (Observation, 06/13/05).

Extracurricular Activities

John has not attended any extracurricular activities (e.g., clubs) in his four years at university: “I’ve never attended any extracurricular activities in my four years of university life because I spend my time studying. Someone told me that you can make friends when you join clubs, but I prefer to make friends among my classmates” (II/24). He has only attended a few activities held by the Centre for Counselling Services: “I only attended activities which the Centre for Counselling Services offered, and not every time. I usually chatted and ate with other students with hearing impairment there” (II/10,11).

John took the initiative in making a lot of hearing friends who were in his classes. He only had one good friend with HI, because they had similar personalities. He felt it was not necessary for him to join extracurricular clubs in order to make more friends.

Support Services

Special Classes

The school offers special English and Chinese classes to the first year HI students, and they hire teachers who know sign language. Students with HI and those who hear are taught English and Chinese separately. John made the following comments about these special classes: “I think the English course was of no help because the teaching style was the same as in my junior high school. The Chinese course was helpful, as the teacher taught at university level” (III/25).

Learning partner

In John’s interview, he mentioned many times that his learning partner has been the

most important person in helping him study in his four years at university. He praised his learning partner: "My learning partner has been the important person helping me study at university. He works very hard for me. He is intelligent, smart and his thinking is acute and lively. He behaves like a professional teacher" (II/36). John also mentioned: "If I had not had this learning partner to help me, my grades would be very bad ... He has really helped and guided me in these four years, so I think that we do not relate to each other as friends, but as teacher and student" (II/36,37). He also added: "I was so lucky to meet such a good learning partner. I know some students' learning partners are not as good as my learning partner" (I/43).

He thought that the learning partner system could benefit students with HI. He also mentioned that some students with HI did not have the support of learning partners: "I know some students with hearing impairment studying at other universities that have no learning partner system, but only guidance centers to help students with HI. Students need to ask for help. My friend there with HI does not want to ask for help from the guidance center so his academic grades are very poor. He has failed three courses" (II/36,37).

The Centre for Counselling Services

The Centre for Counselling Services for students with HI offers individual counseling and help for students. The centre also offers many activities for first year students with HI and their learning partners. John remarked: "I often attended activities in the first year but I never went there to ask for help for personal matters, because I think as a university student I am old enough to resolve them by myself" (I/49/50). He added: "I have not attended activities offered by the Centre for Counselling Services in my third and fourth year because they were activities that I do not like, but this year I will attend

the ones that offer information on jobs or training for HI students” (II/12).

John indicated that his learning partner was the most important support for him in his studies at university. The special classes and the Centre for Counselling Services did not offer him more help than his learning partner.

Goal Commitment and Institutional Commitment

University was a novel experience for John. He was the only student with HI in his faculty, and he was quite excited about university life. He recalled: “I was really curious about this art university because I did not know what a university was like before I came here. I like this university. It is famous for having students with HI, but most of the students are hearing, which make it very different from deaf school” (I/24).

This art university has a long history and experience in admitting students with HI, and it is not surprising that many students with HI chose this university. This university has more students with HI than any other university. John likes this university: “I am so lucky to be at the university that was my first choice. As there are more students with HI here, they can help each other. I would choose this university again because I really like it here” (III/2,3).

He also described the benefits in students with HI mixing with hearing students: “If there were only HI students here, it would not be good because the attitude of students with HI tends to be the same and there is no competition and they cannot improve. When there is a mix of HI and hearing students, students with HI will improve and change their thinking because hearing students thinking differently, and with a wider outlook” (III/4,5).

John’s belief in his future has helped him study:

Although I have been under stress and have had difficulties studying at university, I

never thought I would give up my studies because it would be a shame for me to drop out of university. I have always told myself that I need to endure and overcome these difficulties and study hard until I finish university. My academic performance has improved year by year. (II/43,44)

John feels confident that studying hard is the only way for students with HI to finish university successfully: "I believe that I need a university degree to get a well-paying, stable job with good benefits, and think that it would be an honour for me to get a degree. A student with HI is the same as any hearing student and needs to study hard. We must not feel ashamed to be students with HI, as we need to study as hard as hearing students" (II/44,45). When he was interviewed, he had almost completed his university degree and he could see his future clearly, especially what was available in career terms. As a result, he decided to continue his studies in computer design: "When I graduate, I do not want to find a job immediately. I think I will take a computer design vocational training course for one year, and then take an exam and get a license. I have found that there are many jobs requiring computer design" (III/6).

John had a strong goal: to earn a degree and get a well-paying, stable job with good benefits. He liked this university. His high self-esteem and his goal in obtaining a degree made him persist in his studies at university.

Summary

John was a successful university student. Not only did he study hard, but he also had an excellent learning partner to help him. As well, he showed initiative in asking for help and making friends. University life changed John's thinking, and he found that he needed to compete with hearing students. Although he had difficulties, he overcame them and successfully completed his degree. When I interviewed him, he had just passed his

final exam and was waiting for his graduation ceremony. As he recalled his learning experiences, he noted that there were some important influences on him: “The people who have influenced and helped in my school career include: my good high school friend who encouraged and competed with me, my university learning partner who helped and guided me, and my family” (III/44).

When John was asked about the most important things he learned in university life, he said: “I am very satisfied with what I have learned at university and with my own efforts in making friends and getting good grades. The most important things I have learned have been academic, but I have also matured and learned to promote myself. I think that I am a successful student with a hearing impairment” (III/23). He added: “Other than studying, I have also made many friends and have matured and my outlook has expanded. I am also much happier than I was in the deaf school” (I/23,25).

According to the model of persistence for students with HI (Figure 1), John’s individual characteristics were as follows: he was optimistic, goal-oriented, and highly motivated. His parents’ high educational expectations helped him to reach his goal. He had experience in mainstream classes, as well as the school for the deaf students before entering university. He had talent in art, and studied hard in the class which prepared students for entering university. Hence, his individual characteristics were all positive.

In terms of academic integration, John considered himself to be academically equal to his hearing classmates, and as a result he spent much time and effort studying, and overcame many difficulties in his pursuit of a university degree. Other factors in his academic integration included: the university support service and an excellent learning partner for help and guidance. His attitude also showed initiative, as he was confident enough to consult on his own with professors if he had questions. Therefore, he was well

integrated academically.

In terms of social integration, John made many hearing friends. He did not isolate himself, or restrict himself to a group of students with HI. He took the initiative in making friends and maintained his friendships. He successfully integrated himself into the wider hearing group. He did not need to join extracurricular clubs to find friends. He seldom interacted with other students with HI at the university. Hence, he was well integrated socially with hearing peers.

John's individual characteristics and academic and social integration were very positive, and as a result he felt well connected to the university. This strengthened his commitment to achieving high marks and graduating. All these factors led to John's persistence with his studies and successful graduation.

Lily's Profile

Introduction

Lily (pseudonym) is a fourth year university student with HI. She is the only person with HI in her family. Her hearing loss was inherited from her mother's side of the family, as her maternal grandfather's brother had two daughters with HI, but her father's family are all hearing people. Lily always uses sign language and written methods to communicate with others. Her mother and sister know sign language, but her father and brother do not. She wore hearing aids until junior high school, but then found them uncomfortable, and stopped wearing them. She lived in the university dormitory because she came from a rural district.

Individual Characteristics

Family Background

Lily has two brothers and one sister. She told me that her father was unemployed and her mother was a housewife. In her interview, she mentioned that she had to work when she was young: "I worked as a dish-washer in a restaurant in my junior high school summer vacations, and I did some piece-work for a local family business in my primary school summer vacations" (I/6). Lily described her family situation: "My parents want me to study hard and support and encourage me. My mother does not want me to know what is going on in the family, especially when it comes to financial problems. Most of my family is unemployed, and because of this I have job stress. I gave all my scholarship money to my mother" (III/23).

Individual Ability

Lily seemed quiet and introverted in the interview. She remarked: "I used to despise myself as an HI person, but I don't anymore, because I have friends with HI who

can sign with me, so I feel happy now” (II/2). She used sign language to communicate, because her education background was almost entirely at a school for deaf students. She was reluctant to speak because she had not been trained in speech.

Pre-University Experience

Kindergarten learning experience

She attended a regular kindergarten with hearing pupils. However, she observed more than participated, because she had difficulty communicating with others.

Primary and junior high school learning experience

Lily spent her primary and junior high school years at a school with deaf students and she recalled that her academic performance was average, “My math was bad - around 60-70% - but my Chinese was excellent at primary school” (I/6). She remembered more vividly her junior and high school years than her primary school life. She described her junior school learning experience thus: “I had difficulty studying in junior high school, because I needed to memorize English. As a result, my English grade was not good, and neither was my math, but my Chinese was good” (I/9,10). She added: “I liked studying Chinese, and I would read books and practise Chinese, and ask my teachers questions. They would edit my compositions. I always read textbooks and never read other books, such as story books” (I/23). When she was asked if she had studied hard, she responded: “I did not study hard because I was lazy and often went to the comic store to read comic books with classmates, and I often spent time watching TV and playing” (I/10,11). Lily also made this comment about the teachers’ teaching methods: “The teachers’ teaching is all the same, and they often walk around in the classroom. Even the new teachers have the same teaching style and that’s a waste of time. It’s not surprising that none of the students are interested in learning” (I/11).

High school learning experience

Lily chose to attend a regular class in the school for deaf students, even though the school offered computer and art classes, because “too many students chose the computer course and I was not interested in art” (I/16). She added: “I had some difficulties and felt overburdened in the regular class, because we had to study many more academic subjects than the other classes. I found English and math difficult, but Chinese, history and geography were fine” (I/16,17). Lily came first in her class and she explained: “I was not good, but others were worse, so I came first because my Chinese, history and geography were good” (I/18).

Lily attended extracurricular activities and entered competitions, such as running, dance, and shot-put in high school, and went to other schools for performances. She said she was not very popular in her class, and she did not make many friends: “I am not special, and no one liked me very much” (I/29). She added, “I had one best friend who commuted with me. In junior high we were in the same class, but in high school she was in the computer class” (I/30,31).

Lily seemed shy and reticent. She came from a lower-income family that was not able to give her financial help. Even though she did not receive any extra help to support her academic achievement, her performance was strong.

Motivation to Enter University

In the last year of high school, her teachers encouraged her and told her that at university, “You are free to learn much more and also get a better job with a university degree. I decided that I had to take the entrance exam” (I/20). Her parents respected her decision. She started to study hard in the last year of high school and she “bought many reference books for the entrance exam and read, practiced and reviewed by myself” (I/20).

She also remarked: “The teachers taught well and were very strict with us, and I had to study hard by myself outside the classroom” (I/21). She added: “Even when I was sitting on the bus on the way home or to school, I still had to take a book to read, because I needed to prepare for the entrance exam in the final year” (I/24).

Lily was the only student in her class to pass the university entrance exam, and she explained why the other five students failed the exam: “Two of my classmates had parents who wanted them to study at university; another did not pay any attention to studying; another had a boyfriend; and the last one had transferred from the computer class, and as a result was weak academically” (I/19). She was very surprised she passed the university entrance exam and observed: “Studying hard is much more important than being smart” (I/26).

Lily decided to take the entrance exam because her teachers encouraged her. She put in a lot of time and effort on her own, and this helped her to pass the entrance exam.

Academic Integration

Grade Performance

Lily found that university life was totally different from the school for students who were deaf. She described the difference between high school and university teaching styles: “We only needed to memorize the content of subjects in deaf school, but at university I need to develop new forms of learning and writing by myself. Deaf school did not teach Chinese art. This has been completely new” (I/32).

First and second year grade performance

Lily mentioned that it was difficult to adapt to university life: “I had problems in my first year of university life, especially with studying,” and “I found it hard to study at university, especially when we had exams. I felt overburdened and tired” (I/34). Lily

described her first year of university: “I read and re-read books and the notes my learning partner wrote for me, but she only wrote down the important points” (I/33). She added: “All the exam questions were in the books, and as a result I had to read the important points, and my learning partner would tell me where they were in the books” (II/2). Her grade point average was around 70% in the first year. She commented: “My first year at university was much harder than in high school, but I never considered giving up” (II/9).

Lily mentioned: “I always used written methods to communicate with my learning partner and other classmates. Four or five classmates were curious about me and they would write and ask me many questions” (II/5). When asked what she thought of her grade performance in the first year, she stated: “I think that I could have done better if I had studied harder” (I/37).

Lily’s grade point average improved to 80% in the second year, but she pointed out: “I became very busy, because I had chosen too many courses. I had still not worked out a better learning style, because there were too many things to learn and it was much harder than the first year” (II/10).

Third and fourth year grade performance

She described her worst university experience as happening in her third year: “I failed the history of western art course, which is a compulsory course, so I had to retake it in my fourth year” (II/37). She explained: “That course was quite complicated” (II/20). She added: “I did not know that at university you can fail, and if it is a compulsory course, you have to retake it. This is not how it is in the school for students who are deaf. I became very nervous and afraid of failing” (II/9). Lily’s academic performance was generally weaker in her third year, and her grade point average fell to 70%, because “I failed one elective course, which had an exam in English. I thought it was going to be in

Chinese, so I got 50%” (II/15). She added: “I also failed another elective course. I have forgotten the title of that course, but the professor was the same one I had for my other failed elective course” (II/15).

Lily felt that the third year of university was different than the first two years: “I did not have my learning partner in my third year classes because we took different courses, and I had to rely on other hearing classmates for help, and sometimes I had to write class notes by myself” (II/16). Lily indicated that she had the same learning partner for her four years at university but her learning partner was busy in her last year at university, because “we have a graduation exhibition, so everyone is busy especially from April to May” (II/22). When asked about her academic performance in her last year, she cautiously replied: “The exams are not finished yet” (II/22).

Interaction with Faculty

Lily said that the professors pay special attention to her: “If the professor knows that I am an HI student, he or she asks my learning partner if I have any questions. If I have a question, I usually ask my learning partner to ask the professor for me” (I/40). She also stated: “The professors usually take the initiative in asking me if I have any questions” (II/6).

Lily mentioned that she went to a professor to ask for help twice: “Once in the first year, to ask about art work. The other time was in my fourth year, when I asked the professor to help me and tell me what I needed to change in my art work for the graduation exhibition. That professor is nice” (II/28). She used written communication to ask them for help. Lily also made comments about her professors: “Some professors do not speak to the students or pay attention to them, and they are bad. Good professors are really concerned about their students” (II/39).

She had to take an extra compulsory course because she had failed it earlier, and made these comments about the professor of that course as follows:

She was new, because our old professor had gone to Japan, and she did not know what had been taught. She asked us what we had done, and she was so stupid that she wrote the artist's name down wrong on the blackboard, and she spoke so quickly that I could not understand. (II/22)

She also commented on the professors' teaching styles: "Some professors speak a lot, and my learning partner has difficulty in keeping up when she writes down the important points. It would be easier if the professors used overheads" (II/38).

Quality of Effort

Lily was not self-confident, as she stated: "I am not confident in my studies at university, because I think I have low ability. In high school, only two of the teachers believed that I could pass the entrance exam. The other teachers did not believe in me, and thought it was a fluke that I passed" (III/13).

Lily felt stressed and disappointed when she failed her course: "I felt ashamed because I failed that course and, when I came to retake it, my younger classmates knew I had failed it earlier" (III/2). Lily made this comment about her failed course: "I felt so upset about it. I think that it was a kind of learning experience for me. The university professors do not care if you are hearing or HI, but the high school teachers would help us" (II/23). She also remarked: "If there was an exam coming up, I would feel so nervous and stressed, especially in those subjects that I am not good at. I am so afraid that I will fail" (III/3). Lily felt stressed and overburdened about her art class: "Although I studied art in high school, I learned western art, not Chinese art. Western art is easier, and it is all colour painting. Chinese art is much more difficult, because you cannot redo it if you

have made a mistake” (II/14).

Lily also stated about her essay assignments as follows:

I need to write many essays, but my learning partner does not help me with them, because she only takes down notes for me in class, and any work after class is my business. My older HI classmates help me to write my essays. I usually ask my hearing classmate to check my essay. She helps me to edit it, and then I hand it in to the professor. (II/18,19)

Lily made this comment about her academic performance at university: “My grade performance is average, and I feel that I only study hard 70% of the time, and other 30% I spend chatting on MSN” (II/24). She added: “I work harder when it comes to exams. I always worry that I will not be able to get a job, because my friends have not been able to find a job for some time” (III/4).

Lily found it much more difficult to study at university, and she needed to put in a lot of time and effort. Despite her efforts, her grade performance was not improving. She even failed some courses and she did not feel confident about learning. The professors were concerned about her, but she seldom asked the professors questions by herself.

Social Integration

Peer Interaction with Students with HI and Hearing Students

Lily lived in the campus dormitory for four years, and she stated: “I think that living on campus is better for me because I can meet students with HI, especially older students with HI who can help me” (I/35). She added: “Most of my friends are students with HI” (I/39), and “most of my university life has been spent with students with HI, except when in class” (I/35). Lily mentioned that her best friend was Annie, another student with HI.

Annie took me to visit her dormitory, and I saw Lily in Annie's room, and she told me that they shared the same room (Observation, 09/06/05). When I attended an activity offered by the center of counseling service, I saw Lily and Annie sitting together at a small table, and they were communicating to each other using sign language. Occasionally, they burst out laughing (Observation, 10/06/05).

Lily stated in her interview: "I have only made a few hearing friends, and they are my classmates. Three of them are learning sign language, but I always use written methods to communicate with them" (I/35). Two of them were "on my MSN list. They text me when they want to help me, and we go out for lunch" (III/21). She also mentioned: "I made one or two hearing friends when I was in the volunteer association, and sometimes we meet on campus, but we do not communicate on MSN" (II/32). She considered that "friends are important when you are studying at university, because you can ask them for help with your school work, whether they are HI or hearing friends" (II/35,36).

Lily felt stressed about making friends: "Some HI and hearing friends' social skills are not good and as a result we have some communication problems. I treat them as casual friends. The HI students come from different schools, so sometimes their attitudes are not good, especially when they are being selfish and never think about others" (III/5).

Extracurricular Activities

She attended one university volunteer association in her first year: "I attended one club that helps other people, because I want to help others. We went to a center to serve and help old people" (I/36). She attended the same volunteer association in the second year with her learning partner, who had introduced her to the association, and stated: "We were all together in a group with many hearing students" (II/12). She apparently did not

make any friends in the association, as she remarked: “I did not make any friends, even though I took many courses and spent time with other students with HI who live in the dormitory” (II/11). Lily also mentioned: “I did not attend any school club in my third and fourth year, because I was busy studying” (I/36).

Lily made friends mostly with students with HI, and she spent most of her time with them. She only had a few hearing classmates who interacted with her in a superficial way. Lily also attended a university club for two years and did not make any friends there.

Support Services

Special Classes

She mentioned that there were special classes for students with HI in English and Chinese in the first year. She stated: “I felt that Chinese was harder than English, because the Chinese teacher was stricter than the English teacher, who would tell us that we had to study hard. Both of these teachers were really concerned about our performance” (II/31). Although she thought that the English special class was easier than the Chinese one, she pointed out: “I felt that English was still difficult for me, because my English ability is weak. This is because I did not learn English well in high school” (II/7,8).

Learning Partner

Lily had the same learning partner in her four years at university, and they both lived in the same dormitory. She described her learning partner: “She helps by writing down notes for me in class. We do activities together, and she tells me the important class announcements” (I/41). She added: “My learning partner helped me a lot in my first and second year, when we were taking many of the same courses. In the third and fourth year, however, we took different courses, so I needed to ask other classmates for help” (I/41).

The Centre for Counselling Services

The Centre for Counselling Services offered activities for students with HI, and Lily stated: “I would attend the activities when I had the time” (II/4). She added: “I seldom went to the Centre for Counselling Services for help” (II/30), but when the centre had meetings with her to ask about her learning situation, she admitted that she felt “the Centre for Counselling Services teachers were nice” (II/30).

Lily thought that her learning partner was her best source of support in her learning, especially in her first two years of university. She also had a positive impression of the special language classes and the Centre for Counselling Services teachers.

Goal Commitment and Institutional Commitment

Lily stated: “I like to study at university, and all my professors and classmates are nice” (I/38). After graduating from university, she planned to find a job and learn about computers and cooking (I/38). If she had to choose her university again, she said: “I would probably choose this art university again, but this university was actually my last choice. I probably would have preferred to study history, library sciences or social work” (III/11). She also remarked on how important it was for her to study at university: “I think that studying at university can help social integration, and help me promote myself and feel happy” (III/12). She stated: “It’s better for me that the university has HI students. It would be much more stressful if there were only hearing students. It’s much easier for me to study if I can use sign language with other students” (III/9,10).

When asked if she had ever considered dropping out of university, she made the following comment: “My mother does not want me to drop out, and I do not, either. I think that it would be a pity to give up university. I saw an older classmate drop out and felt it was such a waste of time” (III/9). She also remarked: “I do not want my family to

feel disappointed with me. I need to keep studying until I finish and find a job to help my family” (III/26). She also mentioned: “I do not want my high school teacher to be disappointed with me. I need to finish university, because she spent a lot of time teaching and encouraging me” (III/16).

Lily held strong goals and felt it would be an honour to finish university and find a good job. She wished she had chosen another university which had a department of literature, but she also liked this art university. Her strong personal goals contributed to her persistence in studying at university.

Summary

Lily worked hard and did well in Chinese, history, and geography but not as well in art subjects, especially Chinese art, which was a new subject for her. Lily did not feel confident about her learning ability at university, because she had failed some courses. She studied hard, however, and endured all the stresses, and insisted on studying until graduation. She also had friends with HI who were helpful, and as a result she did not feel lonely in her studies at university.

Lily described what she had learned most in her university life: “I think that I learned a lot more academically at university than in high school, and I have made more friends. I have had to develop different learning methods. I have needed to search on the internet to write my essays at university. I find that I have become more mature and independent” (II/27). She added that she has learned about “art, computer technology, typing and swimming” in university, and these are subjects that she did not study in high school (I/38).

She mentioned: “My older HI classmate and my best HI friend Annie support me when I am depressed or have emotional problems, even when I am stressed. I seldom tell

my parents, and I only ask my learning partner about school work” (III/17). She added: “I feel good that I can share things with my internet friends through online chatting. We do not need to meet each other” (III/18).

She also stated: “I have a close relationship with my friends with HI and family, but I have a more distant relationship with my hearing classmates. I only had a close relationship with my learning partner during the first and second years. It became a distant relationship in the third and fourth years” (III/19).

Lily identified the most important factors in her pre-university schooling as follows: “My family was important in my primary and junior learning, and my teachers played an important role in my high school learning” (III/27). At university the factors contributing to success were “most importantly, my own efforts, then the other students with HI and my learning partner, and finally the professors and hearing classmates” (III/27).

According to the model of persistence for students with HI (Figure 1), individual characteristics, academic integration, and social integration are three main components that affect persistence. As for individual characteristics, Lily came from a low-income rural family, her parents were supportive, and she was educated in a school for the deaf before university. She achieved her best academic performance while studying at the school for the deaf. Lily was goal-oriented, hard working, but seemed to lack self-confidence.

In terms of academic integration, Lily was fairly integrated. Although she failed two courses and lost some self-confidence, her academic performance was in the average range. Her learning partner contributed to her academic integration by taking notes for her during the class. Lily felt comfortable asking questions of her learning partner, but was too shy to take the initiative to ask her professors for help.

With regard to social integration, Lily appeared to feel connected with other students with hearing impairment. Although Lily attended an extracurricular club, she did not make friends there.

Lily's academic and social integration was not very strong and as a result she did not feel fully involved at university, and was disappointed with her achievements. Her individual characteristics, academic integration, and commitment to graduation helped her persist until graduation.

Maggie's Profile

Introduction

Maggie (pseudonym) is a third year university student with HI. When she was one year old, the doctors found that she had lost her hearing, and the cause is still unknown. She is the only one in her family with hearing impairment. She writes to communicate with hearing people, and uses sign language with students with HI, but she speaks at home. Her sign language is quite slow and easy to understand, compared with other students with HI. She is a commuter student in the university.

Individual Characteristics

Family Background

Maggie only has one sister, her father is a bus driver and her mother, a housewife. She recalled: "When I was in kindergarten with some HI and hearing pupils, my mother stayed with me every day until I entered primary school. She wanted me to speak with the hearing students. She would ask me questions and force me to practise speaking, and then she would correct me" (I/14). She added: "My mother was the only one who understood what I was saying" (I/15). Maggie also mentioned that her father "had high expectations for me, and forced me to study before primary school" (I/14).

Individual Ability

Maggie had worn a hearing aid since she was in primary school, and she recounts: "When I was young I had to be forced to wear my hearing aid, because it was uncomfortable for me. Since last year, however, I have wanted to wear them, because these new ones are much better than old ones" (I/6). Maggie seemed mature and bright, and during our interviews freely expressed her opinions. She was also talkative and forthcoming when she described her learning experience and personal problems

(Reflective Journal, 15/06/06).

Pre-University Experience

Primary school learning experience

Maggie attended a special class for students with HI in a regular primary school for one semester, but then transferred to a school for students who are deaf. She remarked: “I did not like to study and had difficulty communicating with my hearing classmates, because we did not understand each other’s speech” (I/12). She added: “My classmates would tease me” (I/12). Maggie’s primary, junior high and high school experience was at a school for students who are deaf.

She recalled: “My grade performance was bad, and I got many test marks under 50% in grades one and two. My parents were very worried. My father knew that my math performance was bad, and as a result he taught me himself, and forced me to practise math exercises and questions at home” (I/24). She added: “My marks in Chinese were good, because the teacher encouraged me, and I really wanted to study Chinese” (I/26).

Maggie’s grade performance improved in her third year of primary school, because “I paid attention when the teacher was teaching and I also studied at home” (I/26). She also mentioned: “I came first in class in the third, fourth and fifth grades, and this surprised all my classmates” (I/29). She thought that her teacher from the first grade to the fourth grade helped her lot, and she stated: “My teacher was patient with me, and I concentrated hard in class, and as a result my academic performance was good” (I/29).

Maggie did not live with her parents, because her home was too far from the school for students who are deaf. She lived at her grandmother’s house from the second grade of primary school until the third grade of junior high school. While she lived with her grandmother, she would play and study with her younger hearing cousin. Maggie

described how her cousin helped her as follows:

We took the bus to school together every day, because her school was close to my school. She often taught me Chinese, because her school level was higher than mine. We often used speech and both of us were able to lip-read. If I had a question, I would ask her for help. Her Chinese composition was excellent, and she would edit my compositions and help me to understand my mistakes. (I/27)

Maggie's aunt would also teach her math and Chinese, and check her homework. She recalled: "We had a close relationship, and she behaved as though she were my mother or older sister. She would play with me during the summer vacation, because I did not go back home" (I/31). She also attended art summer camps with hearing students every year.

I saw Maggie, her mother, and aunt at a career training information activity offered by the Centre for Counselling Services. The three of them were sitting together and sometimes communicated through writing (Observation, 16/06/05).

Junior high and high school learning experience

In junior high, Maggie took an oral class in which all the classmates spoke and the teachers taught using a mixture of sign language and speech. She stated: "I used sign language or speech to communicate with the other classmates, depending on the classmate's habits of communication" (I/35). Her academic performance was quite good, and she described her achievements: "I always came first in grade performance in junior high school. English and history were my two favorite subjects. My math was quite good, and my only weak subject was science. I would ask questions when I was in class, and study at home. I did not find any of the subjects very difficult" (I/33). Maggie also had art class once a week. She seldom met up with her cousin when she was in junior high,

because she spent a lot of time studying in tutorial classes after school.

English was her strongest subject, because “I was interested in studying English and when I was in primary school I had wanted to go to America to study, because I wanted to understand its culture. As a result I studied hard in the English class” (I/37).

Maggie wanted to continue in that school when it was time for high school, because “I wanted to be with my friends, and as a result I did not enter a regular high school” (I/36). She took a class that prepared the pupils for university entrance exams. She still came first in academic performance and also took art classes in high school.

Maggie was optimistic, active, and hard-working in her school work. She also received lot of attention and help from her family and teachers. As a result, she did very well academically.

Motivation to Enter University

Maggie made the decision by herself to take the university entrance exam, as her parents did not encourage her to go to university. She explained why she wanted to go to university: “I heard that we could learn a lot at university, and that campus life is exciting. If you study at university, you can go further in the future” (I/42). She mentioned: “I studied hard on my own in the third year of high school, because I needed to prepare for the university entrance exam” (I/42). Maggie had to work particularly hard in English, Chinese, math, history, and art during the summer and winter vacations. She thought that studying during the vacation period helped her a lot. She was the only student who went on to university from her class, because she passed both the academic and art exams. The others did not pass the art exam. Maggie was highly motivated to enter university and she also put in a lot of time and effort into studying for her entrance exam. Consequently, she did very well on the exam.

*Academic Integration**Grade Performance*

Maggie entered the visual communication design department of this art university, which was her first choice. She found that “university is very different from deaf school. The teachers use sign language in deaf school, but professors here use speech” (II/1). She added: “It is hard to study at university” (II/1). Maggie compared the high school and university tests as follows:

In high school I only needed to concentrate in class, and then I would know what would be in the tests. At university, this is not enough; I have to spend more time studying outside class to cover the material for the tests. For example, the material in the history course is the same as in high school, but the course is examined differently. We never have multiple choice tests at university, because the professors ask us essay questions instead. I am lucky that I am interested in history, and as a result I knew how to answer the questions in the history test, and I got 80% in that course. (II/2)

First year grade performance

Maggie found that she needed to study harder at university than she had in high school, especially for the design courses which she had not taken in high school. She reflected: “I found these courses were difficult, and I needed to go to the library to borrow books. The professors would ask us to go out and see art exhibitions” (III/10). She found some introductory courses difficult, and some not. She stated: “I am interested in history, and as a result I did not find it difficult in the introduction course in history, but I found the psychology course difficult, because I did not understand what the professor was talking about” (II/4). She added: “My learning partner would tell me what professor

was saying, and this helped me to understand most of what the professors said in class” (II/4). Maggie found that it was difficult to understand some subjects and would “often ask my classmates, and they would answer my questions in MSN. My learning partner did not have MSN, which meant that I could only ask her questions on campus” (II/5).

In one introductory course, the professor encouraged class participation and discussion, and would listen to their presentations and opinions. Maggie found this class experience negative:

I expressed my own opinions on whether we should use plastic or paper bags. I was against using plastic bags, but my hearing classmates told me that I was wrong. They maintained that using paper bags leads to more trees being cut down, and as a result they are no good. They said that plastic bags are better, because they can be recycled. The discussion developed into an argument, and I did not know how to defend my opinion, and so my learning partner backed up my opinions on my behalf. I felt ashamed that I could not defend my position when they told me that I was wrong. (II/10)

Her learning partner took the same courses in their first year of university, and she helped her a lot. She remarked: “I sometimes had lunch with my learning partner and her friends, and she would interpret for me” (I/14). Maggie’s average was 85% in the first year of university, which resulted in a scholarship prize. She gave half of it to her mother.

Second year and third year grade performance

Maggie had an grade point average of 83% in her second year at university, because “the courses were more difficult, and my learning partner was not always in the same course” (II/24). She had to ask her other classmates to help her, but “sometimes

they would not help me, and I had to ask to borrow the professor's class notes" (II/13).

Maggie would tell the professors that she had a hearing impairment, and had to ask one of her classmates to help her. Sometimes, however, that classmate would not write anything down for her, because "she said that the professor's teaching was boring, and as a result she did not want to write it down" (II/24). She added: "In that case, I could only write down what the professor wrote on the blackboard, and ask the professor questions after class" (II/24). Sometimes she would meet up with another classmate in the faculty for help. Wendy and Helen, who are other students with HI in the same year, had learning partners who were also able to help her.

Maggie only achieved an academic average of 80% in her third year at university, because "I did not study hard, and wanted to relax more" (II/30). She observed: "The compulsory and practical courses were new for me, and I felt they were much more difficult" (II/31). She added: "We had to go out and photograph and evaluate the local design environment and write essays about it. This took up a lot of time. My learning partner and I were in the same group, and I took the responsibility of writing the introduction and conclusion of the essay" (II/31). She mentioned that she seldom watched TV compared to her second year, but she did surf most of the university students' favorite websites on the computer.

Interaction with Faculty

Maggie was the only student with HI in her year in the faculty of visual communication design, and she felt very lucky that her professors and classmates would help her. She recalled: "Once I misunderstood the coloring professor's assignment requirements, and found that my assignment was different from that of the other classmates when I handed in it. The professor is good and knows that I am a student with

HI, so he showed me what coloring materials I should use, and I understood then what I had to do” (II/2). She also remarked: “My learning partner once forgot to tell me that I needed to write five art diary entries, and consequently I only submitted one. My learning partner assumed that I already knew, but I did not know. The professor allowed me to submit them in the following class” (II/6).

Maggie described how her professor made allowances for her as follows:

I remember that I did not understand what materials were needed for one particular design assignment, even though the professor had shown us an example of what he wanted. As a result, I did something with the wrong materials. The professor allowed me to do it again, but I did something wrong again. I felt very ashamed. The professor then showed me what the other students had done, and I managed to do it correctly on my third attempt. (II/9)

Maggie stated that she interacted only with a few professors: “Some professors are nice, especially one professor, who treats students as though they are friends. All the students like him. I only ask questions of the coloring and history professors. I am intimidated by the others, and as a result my learning partner comes with me and asks them questions for me” (II/22). She also preferred it when professors used overheads and did not talk too much, because she found she would get bored and sleepy.

When Maggie was asked whether she asked for help from the professors, she replied:

I would often ask the professors questions or request help in my first and second year, but mostly I would ask my learning partner to help me. I would ask the professors by myself, if my learning partner was not there. I think that it is better if

you ask questions or request help, but sometimes I am scared and do not ask, but instead ask my learning partner or classmates. (II/41)

Quality of Effort

Maggie was not satisfied with her grade performance, because “it is lower than in high school. I got an grade point average of over 90% in high school. I feel that I have not studied hard enough, and I hope that I will work harder in my fourth year” (II/39). She explained her reasons for not working harder: “I have not spent a lot of time studying at university compared with high school. I studied a lot in high school, but I have spent a lot of time at university chatting on the internet, and reading comic books and novels” (III/4). She added: “I think that I only study hard 60% of the time” (III/36).

She considered that “the hearing students’ performance is an example to me when they do well” (III/12), but she felt under pressure about school work: “I worry about my academic work, which includes tests, assignments to hand in, and design projects” (III/5). She added: “I ask a senior HI student in the same faculty when I have questions, and she tells me to study hard” (III/6).

She had felt stressed in her second year of university, because “I chose too many courses. I hope that I won’t choose too many in the future. I am so lucky that I have not failed any course” (III/18). She described her worst group work experience as follows:

I remember that I felt very stressed when we had to divide into groups of three, because one classmate from another faculty seldom came to class. The other girl in the group insisted on doing the work on her own, because she did not want to have an HI student in the group. She thought a student with HI would not be good enough. The professor could tell that one person had done all the work, and scolded our group, and I felt very ashamed and distressed. (III/19)

Maggie liked the English subject since she was young and enjoyed reading.

I like to read many books, including American, British and French detective novels. I often went to bookstores when I was in high school, but I usually borrow books from the library these days and only buy them if I do not have enough time to read them. I liked to watch TV historical drama when I was in primary school, and this made me really want to read novels. I still read many English books as well as Chinese books. I need to memorize English vocabulary and review English grammar, so I can understand what I am reading. (II/37,38)

She felt that if she improved her English, she could study abroad in the future. She remarked: “I was upset when my learning partner told me that some of my classmates intend to study abroad. I really want to study abroad, but I do not study hard enough to compete with them” (III/17).

Maggie did not work as hard as she had in high school, and she felt it was difficult for her to take many courses. She felt she had a lot of pressure from her academic work, and as a result she only focused on her favorite subjects.

Even though Maggie worked quite hard, joined in class discussions, and asked some professors questions, she still found the courses difficult. Moreover, throughout university, Maggie’s grades declined somewhat.

Social Integration

Peer Interaction with Students with HI and Hearing Students

Maggie liked to make friends, because “I have found that making friends is very important for me at university. Both HI and hearing friends are important” (III/2). She liked to share her learning experience with other students with HI: “I like to ask about

learning experiences of senior classmates with HI, because it can be helpful” (III/2).

Maggie also remarked: “Since I have been at university, I have not made many hearing friends, and interact mostly with HI students” (III/32).

Her learning partner also helped her to make friends: “My learning partner helped me in my first year by introducing me to her hearing friends” (I/14). She commented: “I usually only interact with hearing classmates when I ask them academic questions after class” (III/11). She added: “My classmates are nice and helpful to me, but everyone is so busy in the second and third years that we seldom meet, and sometimes we just say hello in passing, because some of them are too lazy to write things down” (III/13).

In the third year, she made new hearing friends who were classmates in the same introductory courses, and observed: “I have made a couple of friends: one male and one female. We are in the same course and we chat in MSN, usually about movies because I like to watch movies, but we never go out to movie theaters. I often saw movies with classmates with HI in high school, because it was half price for us” (II/15).

Maggie often went to the room for students with HI in order to meet other HI students: “I always come to this room to use the computer, because I can meet other students with HI there and chat with them. This resource room is for HI students to use in our free time” (III/15).

Extracurricular Activities

Maggie seldom attended extracurricular clubs: “I did not attend any extracurricular activities in the first year, because I needed to take special English and Chinese classes at night. This meant that I had little time” (II/17). She said that she only joined one club with her learning partner: “I attended a photography club in my second year. The head of the club is my learning partner’s best friend, and my learning partner encouraged me to

join. There were only two students with HI in this club, and we often took pictures together on the weekend. I would ask the head of the club whenever I had questions” (II/27). She quit the photography club because she had other personal things to attend to in her third year at university.

Maggie spent her social life mostly with students with HI on campus, and only made a few hearing friends who had shared the same hobbies. She was involved in a university club for one year, but did not make any friends there.

Support Services

Special Classes

There are special classes for students with HI in English and Chinese, and these two courses were taught in sign language. Maggie made the following comments about these courses: “I felt these two courses were helpful for me, but I still would have preferred to take these courses with hearing classmates. These two courses were easier than my hearing classmates’ English and Chinese classes” (III/2). Her learning partner told her that these regular classes are difficult for students with HI, saying: “They need to read the English newspapers. If I had taken these two courses in a hearing environment, it would not have been good for me, because it would have been too hard, and I would probably have received a low mark” (III/2).

Learning Partner

Maggie had the same learning partner throughout her studies at university. She recalled: “My learning partner knew that I was an HI student at the beginning of the first year, and she wanted to communicate with me, and understand me. As a result, I taught her sign language and she became my learning partner” (I/8). Her learning partner did not know sign language at first, which meant that they had to communicate with writing, and

“I taught her sign language, and she practised it at home. By the second semester she knew how to sign, and after that she would mostly sign for me” (II/4).

Maggie thought that her learning partner had been an important person for her in her university studies. She stated: “We have a close relationship, and she is really concerned about me. She checks my written assignments and edits my essay. Her writing is excellent, because she has already written a novel” (II/25). She added: “I often make contact with her using cell phone messaging when I have academic questions” (III/11).

Maggie described how important her learning partner had been for her: “If I had not had a learning partner, I think I would not have been able to study here” (II/23). She added: “She encourages me and provides me with emotional support. Because she knows sign language, I can communicate my feelings to her, especially about my parents, who are having difficulties” (III/30).

I observed Maggie in class and I found that her learning partner mostly used sign language to communicate with Maggie. She acted as a sign language interpreter during the class, and I noted that her sign language was quite good (Observation, 22/06/05). I observed her learning partner helping her, including interpreting the lecture for her and assisting her with oral presentations. She also explained why the classmates were laughing during the class oral presentation (Observation, 22/06/05).

I observed Maggie in another class and found that she had forgotten to bring the folder for her assignments. She went to the Centre for Counselling Services to ask for help, but they did not have the folder. Her learning partner told the professor what had happened to Maggie. Her learning partner also helped Maggie to check her assignments that needed to be handed in immediately, and returned a few pages to her which were not necessary (Observation, 24/06/05).

The Centre for Counselling Services

Maggie often attended the activities that the Centre for Counselling Services offered to students with HI in the first and second years of university. She thought that “their activities were good” (II/28). When she was asked if she would go to the center for help, she replied: “The Centre for Counselling Services offers counseling for students with HI, but I usually ask my classmates if I have academic questions, and resolve personal problems on my own. I chat with my old high school friend with HI in MSN if I feel stressed” (II/19). She added: “I never ask for help from the Centre for Counselling Services by myself, because the counseling teachers come to me to ask about my learning and my learning partner situation” (III/1).

Maggie only asked for help once, because she wanted to make new friends. She went to the Centre for Counselling Services and offered to teach in order to meet people: “I offered to teach sign language to hearing students. They made an announcement and five hearing students came to the center, and I taught them sign language twice a week during the lunch time, but those hearing students and I were too busy and the sign language class had to be canceled” (III/1).

Maggie found that all the support services were helpful, but she thought that her learning partner was the most important source of support. She felt that without her learning partner, studying at university would not be possible.

Goal Commitment and Institutional Commitment

When she was asked how she felt about this university, she replied: “If I were to choose my university again, I would probably choose this art university, but on the whole I think I should have gone to an educational university, because I would like to be a teacher. I also like this art university because it is a national institution with a good

reputation among students with HI” (III/26).

Maggie felt a lot of stress studying at university and she sometimes even thought about dropping out of university. She described her experiences as follows:

Once, in my second year, I wanted to leave university because I felt so tired and there were too many essay assignments. I was disappointed with my essay writing because I did not know how to write. I just wrote essays as though they were high school compositions. Later, I read my learning partner’s essay assignments. This helped me to understand what was required, and I asked her to check my essays for me. I am also disappointed that I cannot compete with hearing classmates because they are better than I am in academic achievement. (III/24)

Maggie told her aunt that she was thinking of leaving, and her aunt pointed out that it is not easy to get into university and she should not quit. She also reminded herself that “I received a presidential educational award in high school and this was an honour awarded to only 19 students in the whole country. I felt I must continue studying and graduate from university. It is important for me to get a university degree because I will have a better chance of finding a job” (III/25). Despite momentary doubts, Maggie had strong a goal in terms of finishing university. She liked this university, but she would have preferred to attend another university. She did not show persistence in her studies in her second year, but due to winning an award in high school, her high self-esteem helped her overcome her temptation to drop out.

Summary

Maggie was highly motivated in her studies. She had an outstanding academic record of achievement before university. She was also optimistic and independent, and

enjoyed learning. She excelled in literary subjects in Chinese and English. Her academic performance was good at university, and her overall average was over 80%. Although she had difficulties and felt stress in academic work, especially as her subject major was new for her, she worked hard to overcome them and persisted.

Maggie thought that she had learned a lot at this university, and that it had “widened my horizons and helped me learn better study methods. I am also happy that I have made friends that include students with HI and hearing students” (III/10). She thought that “my best friend is my old primary, junior high and high school classmate with HI. She supports and encourages me to continue studying at university, because she did not study at university herself” (III/28). She added: “My learning partner has given me more academic support than my best friend with HI, but the latter has given me more emotional support” (III/30). She also thought that her senior classmates with HI, friends with HI, hearing classmates, and even the professors helped her to study at university.

She remarked: “There has been little distance between me and other students with HI, and more distance between me and hearing students. There has been a great distance between me and my family, because we seldom chat” (III/32). She added: “The people who have influenced me most other than my friends are: my aunt, cousin, mother, and grandmother” (III/34).

According to the model of persistence for students with HI (Figure 1), Maggie’s individual characteristics were as follows: she was optimistic, goal-oriented, and highly motivated. She had high self-esteem and loved learning. Her parents also had high educational expectations of her. Her early educational experiences were at the school for students who are deaf. She was good at literary subjects, and studied hard in the class that prepared students for entering university. Therefore, her individual characteristics were

very positive.

In terms of academic integration, she overcame initial difficulties and became well integrated. Maggie found that her subject major was new for her. She wanted to compete with her hearing classmates, but was disheartened and stopped working so hard when she did not receive very high marks. However, they were sufficiently high for her to receive a scholarship. She loved getting involved in class discussion and expressing her opinions, and she took the initiative in asking her hearing classmates for help. Other factors in her academic integration included: the university support service, and a conscientious learning partner, who knew sign language and helped her a lot, and also supported her. She only took the initiative to interact with a few professors if she had questions. Therefore, she was well integrated academically.

In terms of social integration, Maggie liked to made friends, but most of her friends were students with HI. She only had a few hearing friends. Maggie would have liked to make more hearing friends, but she did not take the initiative in making these friends. She joined an extracurricular club for a year, but she did not make any friends there. Hence, her social integration was limited.

Maggie's social integration did not enhance her involvement in the university. Her positive individual characteristics, academic integration and strong goal commitment led to Maggie's persistence with her studies at university.

Wendy's Profile

Introduction

Wendy (pseudonym) is a third year university student with HI. She was born with a hearing impairment, but her parents did not discover it until later. They took her to hospital, where she was given a hearing aid. Her family members are hearing, and she always uses speech as her communication method. Her speech is quite clear compared to other students with HI. Wendy was open and talkative in her interview. She described her memories and experiences in as much detail as possible, even offering information I had not requested. She was a commuter student in the university.

Individual Characteristics

Family Background

Wendy is the youngest of three daughters. Her father works in the provincial government and her mother is a housewife. Wendy took speech training classes in two different centers before she entered kindergarten. She recalled: "My mother stayed with me during the speech classes and also taught me to speak when we practised at home" (I/6). I could tell that Wendy's parents cared for her and were concerned about her hearing loss. They sent Wendy to speech training courses for a few years and her mother accompanied her. I attributed Wendy's strong oral ability to the speech training (Reflective journal, 10/06/05).

Individual Ability

Wendy wears a hearing aid and is very talkative, comfortable speaking with both hearing students and students with HI. I observed Wendy at the computer and she was talking with another girl student with HI. I was curious that they used speech to communicate. Wendy told me that the other student with HI was one year younger than

she was, but she did not know sign language, and as a result both of them used speech all the time to communicate. Wendy also mentioned that she understood lip-reading (Observation, 07/06/05).

Pre-University Experience

Primary school learning experience

In kindergarten, she studied with hearing peers and took speech classes. In primary school, Wendy attended a regular class with hearing students. This school had a resource room to help students with HI. There were four students with HI in the same year, but they were not in the same class. She observed: “We had to go to the resource room to learn Chinese and math, and every student with HI had a different schedule” (I/11). The teacher told the whole class that she was a student with HI and asked her classmates to help and teach her. She recalled her achievements: “My grade performance was not good compared with my hearing classmates, but my Chinese was quite good. I felt that hearing students are smarter, and that’s why they got higher scores. I think that I did not study hard, except when there was a quiz or test coming” (I/14). Her mother hired a tutor to help Wendy with Chinese and math in Grade one, because “she worried that I did not understand the teacher’s teaching” (I/17). Wendy also mentioned: “I liked to read story books. My mother usually took me to the library from kindergarten through primary school” (I/15).

She had few friends because “my classmates did not understand what I said, and I usually played with other students with HI during the recess. I always used speech to communicate with students with HI” (I/14). In the summer and winter vacations, she attended summer or winter camp to learn about computers and to play chess. Sometimes she went to camp for children with HI, where they just played games.

Junior high school learning experience

Wendy attended a regular junior high school, which had a resource room to help students with HI in Chinese, math, and English. She usually studied with hearing students when she was not in these special classes. Wendy described her learning experience: “In the first and second years my academic work was OK, but I had difficulties in the third year. I did not understand the subject material” (I/20). She added: “The work in the resource room with HI was easier than in the regular classrooms. The teachers had higher standards for hearing students” (I/21).

She was happy in junior high school, because “there were three students with HI in my class and we all played and had lunch together. We became good friends” (I/19). She also described her hearing classmates: “Four hearing classmates were also nice and we spent time together and often played and joked together. When the class divided into groups, they would ask us to join them. We spoke with the hearing students and if they did not understand, we would write it down for them” (I/21).

High school learning experience

Wendy entered a vocational high school close to her home. She did not like this high school, because “it does not have a good reputation with its students and everyone knows this school is no good” (I/23). She described her reaction to the school: “My mother forced me to study at this high school because I did not have to take the bus to school. I argued with her about it” (I/23). She added: “I would have preferred to go to another high school which had art or advertising design courses, but it was far from my home” (I/23).

She adjusted to this school after a while, but she found that “it was difficult to interact with classmates there, because some students did not behave well” (I/24). She mentioned: “In high school, my classmates were not as nice as my junior high school

classmates, as they seldom spoke to me and they did not care about HI students. They did their own thing” (I/34). In the first year, she did not understand “half of my subjects, such as computer, accounting, etc” (I/25). She told her guidance teacher, and he asked the teachers to help her. There were few students with HI in this school, but the school did offer a guidance teacher to help students with disabilities, which included HI and students with visual impairment.

Wendy attended a school sign language club and learned a little sign language in the first year of high school, but “I found it boring and quit” (I/36). In the second and third years, she did not attend any school clubs, because “I preferred to go to the guidance center to read books or play on the computer by myself” (I/36).

Wendy had good oral ability and a good relationship with her parents. She had attended a regular school, but did not do well academically. She did not interact with her hearing peers much, except in junior high school.

Motivation to Enter University

Wendy’s first year high school academic achievement was good and she felt that “I was much better than the other students” (I/26). In the second year, she decided she wanted to go to university: “I attended a class that prepared me for the entrance exam for university or college. This class was harder than the other classes, and I was the only student with HI there” (I/26). It was difficult for her, because “I did not do well academically, and I got a low pass in all subjects” (I/26).

Wendy described how she studied for the entrance exam:

I needed to study hard in order to pass the university entrance exam, and as a result I stayed at school to keep studying all the required subjects every night. In class, the teacher would ask a student to help me if I did not understand what the teacher was

saying, but that student did not help much. (I/27,28)

She added: “I am grateful to the guidance teacher who helped me a lot to prepare for the entrance exam, and to the student teacher who taught me some subjects not offered in the resource room” (I/29). Wendy indicated why she wanted to enter university:

Everyone knew that I was going to take the entrance exam, and to this end I studied hard. My parents hoped that I would go to university, and my two elder sisters were already university students, and because of this I felt I could not fail. If I had failed, I would have been ashamed. I knew that I needed to study at university to get a better job after graduation. (I/31,32)

Wendy decided to take the university entrance exam because she was influenced by her family. She had high self-esteem and high goals, and so she spent time studying hard.

Academic Integration

Grade Performance

Wendy dreamed of studying fashion design at university, but she heard that that university does not accept students with HI, because the students with HI had not behaved well in previous years. Her mother chose this art university for her. She did not get in to her first choice of department, but her second choice, the fine art department. Wendy described her art ability: “I am not good at fine art, because I only studied fine art at primary and junior high school. In high school, I seldom practised fine art, because there was a lot of homework that I needed to do, and I spent a lot of time studying” (III/2,3). Wendy met another student with HI, Helen, who was in the same class as her in junior high school. She observed: “I was so surprised and happy that we were in the same faculty” (II/12).

First year grade performance

Wendy was very afraid and nervous when she entered university, especially when she introduced herself to the class and: “Everyone looked at me and I was afraid and ashamed, because some classmates came from rural areas and had not encountered students with HI before” (II/1). Her learning partner helped her to introduce herself, because she was afraid that her classmates would not understand what she was saying. In the first year, Wendy’s learning partner was not helpful, because “she usually skipped class and there was no one to help me. She seldom wrote notes down for me when we were in class, and did not even tell me important things I had to know” (I/1). She added: “I went to the Centre for Counselling Services to tell them about my learning partner and ask them not to pay her” (II/2).

Of the introductory courses in the first year she remarked: “These courses were quite heavy and difficult for me, because I did not understand them. For example, psychology is a difficult subject” (II/4). She described how she felt about tests as follows:

I did not understand what the questions in the tests meant, and as a result I wrote down whatever I could remember from the course. I did badly in the tests and I think that I failed, but the professor gave me a pass mark, probably because I am an HI student. The same thing happened in another class that I think I would have not have passed otherwise. (II/5,6)

Wendy was not satisfied with her academic achievement, because she only achieved a grade point average of 78% and was awarded a 20000NT (\$650CDN) scholarship in that semester. She expressed her reaction: “I thought that I had studied hard, but the professors did not seem satisfied with me. I was disappointed that my academic average was not over 80%” (II/7). She described her experiences in the classes: “Helen

and I were only in the same class in the compulsory courses. Some of the elective courses we took were different, and this meant that we were not always together. I got bored if Helen was not in the same course. I just sat and stared into space if my learning partner did not show up” (II/14).

Second year grade performance

In the second year, Helen and Wendy chose the same courses. Wendy stated: “We preferred to take courses together, as we did not feel lonely when we could learn together” (II/15). Her academic average was still below 80%, which meant that there had not been any improvement and she did not receive additional scholarship money. Wendy failed one fine art course (on oil painting), because “my basic skills were not good and I did not work hard, and as a result the professor was not satisfied with my final work” (II/16). She added: “I cried and felt very distressed and upset. I had never failed any course before, even in high school” (II/16). She needed to take that fine art course again because it was compulsory. Her parents knew about the failed course, and “my mother was concerned and encouraged me, but my father joked that I had not worked hard enough” (III/6). She also failed another art course (introduction to coloring), because “I was busy preparing for the final exam and exhibition, so I had no time to study” (III/7). This was an elective course, and she did not have to retake it.

Wendy found that her learning partner did not show up in the second year because “she had skipped too many courses and was kicked out of university” (II/28). She had a new learning partner, who was also her classmate. Wendy described her new learning partner: “She was helpful and wrote down lot of notes for me to read during the class. She used cell phone messages to tell me important announcements” (II/23).

Third year grade performance

Wendy failed two courses in her second year, and as a result “I have had to study hard this year, especially in fine art courses, because I do not want to fail any more courses” (II/22). Wendy described her academic performance: “My academic average was 79% in the first semester, but I hope to get it over 80% in the second term, so that I can get more scholarship money” (II/22). She added: “In order to improve my academic achievement, I study hard and stay up late sometimes” (II/22).

Interaction with Faculty

Wendy felt that the professors in her faculty taught well, especially the fine art professors, and she found that “it is helpful when they use overheads and the TV, so I can see and understand clearly” (II/13). She observed: “The introductory courses have not been good, as the professors say too much and too quickly, and I have had problems understanding them” (II/13). In the introductory courses, “my learning partner would write down the important points that the professor was saying, but the professors seldom wrote them down on the blackboard” (III/19). When her learning partner was not in attendance, she asked other classmates to help her. Once a classmate offered to help her, but “I did not understand his notes, and the next time he forgot to help me, because I did not remind him. That course required many essay assignments and eventually I dropped it” (III/19, 20).

When she had questions, she would ask her learning partner, who would ask her professor. Sometimes “I would ask a question on my own, writing it down on paper to communicate with the professor” (II/9). She also commented:

Not every fine art professor is nice; one male charcoal drawing professor was really mean and fierce to all the class. He would shout at the hearing students if

his or her work was no good. He would come over to me to check my work, and would slap my shoulder if I had not done it well enough. He did the same to my friend Helen. We felt ashamed when he criticized us and the hearing classmates all looked at us. (II/17)

Wendy mentioned one professor that she liked best: "There is another fine art professor, Professor C, to whom I asked many questions, because he is nice to me and helps me a lot. Every student likes him" (III/32). She added: "I ask all my professors questions after class, but most of all I ask Professor C. He knows that we are HI students, and because of this Helen and I ask him many questions and he helps us a lot. He even teaches us after class" (III/33). She also remarked that that professor gave her advice on her assignments: "If I need to hand in several assignments within one week, sometimes I ask the professor to allow me to hand in my assignment work in one week late. The professors allow this if they know I am a student with HI" (III/23).

Wendy said that she intended to ask the professors for help in order to improve her academic score: "I will ask my fine art professors to help and guide me as much as possible. This will mean that they will be satisfied with my work and give me a better grade" (III/25).

Quality of Effort

Wendy described her learning in the following manner: "I think that I have learned a lot at university, but I am lazy sometimes, and as a result the professors give me low marks. I find that if I am not interested in a course, I do not want to learn, and this means that my academic achievement is not high" (II/26,27). She also mentioned: "I do not want to compete with my hearing classmates. I only need to study hard for myself" (III/24). As

she was not good at art courses, she was worried about her final work for graduation: “If I do not work well for the exhibition next year, I will probably need to study one more year to graduate. I do not want to waste one more year. I hope I can graduate on time next year, which means I need to study hard” (III/8)

Sometimes, she felt very stressed about her school work: “There are a lot of assignments and books I have to read which I do not understand” (III/19). She added: “I need to hand in several essay assignments in one week, and I am only sleeping a little and sometimes I have to stay up the whole night to work, but I don’t think I can finish them on time even though I work hard” (III/22). She also stated: “Sometimes I feel too much stress, and I take a rest and watch TV. That wastes some time, and then I go back to studying. I do not study every day and only study before the exam” (III/29). Wendy did not work hard and consequently did not get good marks in her academic courses. Surprisingly, she did not know how to overcome her difficulties.

Wendy’s art skills were not sufficiently developed, and this meant that she found some courses difficult, even though she worked hard. She did not do very well academically and even failed courses. Wendy also ranked her professors according to their teaching and concern with students with HI.

Social Interaction

Peer Interaction with Students with HI and Hearing Students

Wendy observed: “I have made few friends in university, and most of those are only my classmates” (II/18). Her best friend was Helen, because “we study and have lunch together and some classmates suspect that we are lesbian” (II/27). She added: “We help each other and share our emotional feelings, especially when we are under stress and feel helpless” (III/10,11). Wendy has another good friend, Maggie, who was in the same

year but a different faculty from her. Wendy stated: “Helen, Maggie and I all hang out and have lunch together, especially as we all commute and live close to each other. We were together in some introductory courses and we always use cell-phone messages to interact with each other” (III/14). She added: “I also have some other friends with HI in other years” (III/14).

When she was asked how she made friends with hearing students, she replied: “Hearing classmates stick together, and as a result my learning partner is the only hearing person with whom I often interact at university” (III/14). Wendy felt that Helen and she were ignored by their hearing classmates in group work: “When the class needs to be divided into groups, Helen and I are alone in our group if our learning partners are not in the same course. I feel isolated from my hearing classmates, as no one comes to join and share with us” (III/31).

Extracurricular Activities

Wendy had not joined in many university extracurricular activities, because “I was busy studying, but Helen and I attended the university Christmas party and fancy dress parties” (II/11).

Wendy spent her all social life with students who have HI, especially her best friend Helen. They were always together on campus. They helped each other and shared their feelings with each other. She did not join any university club and did not make any hearing friends.

Support Services

Special Classes

In the first year, the university offers special classes for students with HI in Chinese and English. Wendy made these comments about the courses: “I think that it was not

helpful to have all students with HI together. The English class was very easy, but the Chinese class was more difficult, because I did not understand what was being taught. The Chinese textbook was difficult to understand. Both teachers were nice. When I did not understand anything, I would ask them” (II/8).

Learning Partner

Wendy had two learning partners, who were very different in character: one was lazy and the other one worked hard. The second one was really concerned about her learning. Wendy described her reaction to her new learning partner as follows:

I was really scared of her, because she was strict with me. Sometimes she said that I was lazy and joked with me that she would slap me with her shoes. She wanted me to study hard, and consequently she would ask a lot of me in my academic work. I know she wanted me to be good, but I still felt very sad. Sometimes I would not prepare for the class discussions, and she would insist that I really needed to prepare for them. Other times I would skip the Monday morning decoration exhibition duties, or ask her or another student to help me with it. She would insist that I needed to do it myself, and she would get mad at me and castigate me with a strict face. (II/24)

When she was asked if she had considered changing to another learning partner, she stated: “I do not want to change learning partners again, because we have been together for two years and she understands me” (II/24). I observed an art class, and I saw Wendy’s learning partner writing down notes during the class, even though the classroom was dark, because the professor was showing art pictures on the overhead projector. Sometimes she would check other classmates’ notes, who were sitting beside her, and would talk to them to make sure that she had written the information down correctly. She was also tape

recording the lecture. She gave some note sheets to Wendy after class, and came to me and said: “This course is difficult for me to understand, so how can I help Wendy understand?” (Observation, 07/06/05). Although Wendy’s first learning partner was not helpful, the second one was conscientious about taking notes and genuinely wanted to assist her.

The Centre for Counselling Services

Wendy attended activities held by the Centre for Counselling Services for all students with HI and their learning partners in the first year of university. She stated: “I have chosen to attend only the activities that interest me since my second year” (II/20). She felt that “the Centre for Counselling Services should offer more activities for third year students with HI. I found that there were more activities for freshmen and second year students” (III/40). She commented: “I have seldom been to the Centre for Counselling Services for help since I changed my learning partner, and I never ask for help with my personal problems. I still attend activities in the Centre for Counselling Services. Some activities are concerned with students’ with HI feelings, and I would tell the counseling teachers how I am feeling” (II/25).

Goal Commitment and Institutional Commitment

Wendy never thought that she would quit university, and she intended to graduate from university even if it was later than expected. Therefore, she needed to endure the academic pressure: “I do not want to transfer or drop out of university, because I do not want to waste time and money” (III/8). She added: “I hope that I can find a good job after graduation. In fine art, it is difficult to find a job, and so I hope that I can find one involving computers, because I learned data processing in my first year at high school and got a license” (III/9).

When she was asked how much she liked this university, she replied: “If I had been able to choose my university, I would have chosen the university that has a department of clothes design, because I want to be a model” (III/1). She also mentioned: “I feel OK at this university, but the department of fine art was not my first choice, and I would have preferred to study visual communication design” (III/2). Wendy did not like this art university because she was not good at art but she had a strong goal: to earn a university degree and get a job. This strong desire led to her persistence in her studies at university.

Summary

Wendy did not work very hard at university, and as a result her art performance was weak. She failed some courses and she was not satisfied with her university performance, whether in academics, making friends, or the effort she put into studying. Wendy did not feel confident about her learning, and she observed: “I do not know what I have learned most at university, because I have failed courses” (III/18). She felt inferior to others, had low self-esteem, and felt that she had not made any notable achievements.

Wendy considered her most important sources of support in university to have been her parents, herself, the professors and her best friends with HI. She described how they supported her:

My parents encourage me a lot, as they are really concerned about me, especially when I am under stress or fail a course. I also study hard by myself, and the professors talk to me and teach me, and my HI friends encourage me. If I feel unhappy or upset, I tell my best friend Helen. I also tell my parents about important things in university, especially my mother. (III/10)

When she was asked about her learning partner, she replied: “She has never encouraged me” (III/10).

According to the model of persistence for students with HI (Figure 1), Wendy's individual characteristics were as follows: she had low self-esteem and poor work habits. She had been educated in a regular school and had speech training in early childhood. Her oral ability was good and her parents had high educational expectations of her, but she was not good at art. She studied hard in the class that prepared students for entering university. Her individual characteristics were not very positive compared to some of the other participants.

In terms of academic integration, Wendy thought she was inferior to the hearing students, and her art ability was weak. She did not study very hard and her academic performance was poor. She had two learning partners to help her, but one was lazy and other one worked hard for her only in the class they shared, and did not offer any help after class. Wendy did not show much initiative by asking the professor questions, and she only interacted with the professors she liked. Hence, Wendy was not well integrated academically.

In terms of social integration, Wendy only made friends with HI and spent all her time with a group of students with HI. Wendy did not attend extracurricular clubs, and did not socialize with hearing classmates. Although she was friends with Helen, Wendy was not strongly socially integrated into the institution.

Wendy's academic integration was weak because she did not earn high marks in her subject major, and she did not spend time studying hard. She limited her social circle to the group with HI, and did not show much integration into the university social life. Neither academic nor social integration had a positive effect on her persistence, but her commitment to graduation was strong and reinforced her persistence with her studies.

CHAPTER 5

Perspectives on Students with Hearing Impairments: Learning Partners, Professors, and Personnel from the Centre for Counselling Services

This chapter will present the data from three sources: learning partners, professors, and personnel from the Centre for Counselling Services. Some observations and the self-reflective journal will complement these sources.

Learning Partners

The Role of the Learning Partner

The provision of learning partners is one of the support services for students with HI at the university the research participants attended. Every student with HI has his or her own learning partner whom they have chosen independently. If there are no volunteers among the class to be a learning partner, the student with HI approaches a student and asks him or her to be a learning partner. The learning partners are paid by the government and their work mostly focuses on taking notes in class for their partners. They also inform them of important announcements made by the professors or the university. As well, they facilitate communication between the professors and their partners with HI by asking the professors questions on their behalf and relaying messages from the professors to their partners with HI.

As learning partners, they are required to take several training activities offered by the Centre for Counselling Services, in which they are trained on how to help their partners with HI. The centre also holds activities in which the learning partners share their personal experiences with one another. Additionally, they are required to submit a report to the Centre for Counselling Services twice every semester and to talk with a counseling teacher once every semester about the progress and the problems experienced

by their partners with HI

The learning partner must take the same courses as their partner in the first year of university, but in subsequent years the learning partners may choose their own electives and only remain in the same class as their partner with HI for compulsory courses in the faculty. Some students with HI (John, Lily, Maggie, and Helen) retained the same learning partner throughout their university studies, but the others (Annie, Jenny, and Wendy) had more than one learning partner.

The Three Different Types of Relationship between the Learning Partners and their Partners with HI

According to interviews and observations made in this study, the learning partners may be divided into three types in terms of their relationship with their partners with HI.

The “tutor” style learning partner

John’s learning partner was unique among all the learning partners. From my interview with him and from interviews with John, it was clear that he was a mature, independent, and out-going student compared with the other learning partners. He was professorial in his thinking and attitudes, and he was a role model for John. He would consider how he could best help John, not only by providing general help, such as taking notes in class for him, but by actively teaching him (Reflective journal, 02/06/05). John’s learning partner modeled the importance of strong academic achievement and influenced John so that he in turn developed the same attitude. He had a mature attitude and mentioned that a learning partner cannot afford to skip class and needs to reorganize notes for the partner with HI. He thus set high standards for himself (JL-10).

He identified John’s weaknesses at the beginning of his first year and was therefore able to give him specific assistance. He knew that John needed to develop good peer

relationships and a serious attitude to his work. Thus, he helped John establish a good relationship with his hearing classmates and instilled in him a more serious attitude to his artwork (JL-8). John responded to this encouragement and gradually made friends with his hearing classmates by himself and he studied hard to get good grades.

The “close friend” style learning partner

The learning partners of Maggie, Jenny, and Helen stated that they did not only have a tutorial relationship with their partners with HI, but they also became friends (HL-11, J11-3, JL-11, ML-10).

Maggie’s learning partner observed that they shared feelings and encouraged each other (ML-10). Their relationship became closer because Maggie taught her sign language and they communicated by signing. Maggie’s learning partner really wanted to help her and she practised sign language diligently. She treated Maggie as a friend and wanted to help her as much as she could, but sometimes she did not know how. She wanted to help her improve her work, but she could not teach her everything step by step, and could only give her suggestions and encouragement (ML-10). Maggie’s learning partner also took her to clubs and introduced her to her social group in the first year of university. In classroom observation, Maggie’s learning partner really assisted her and checked her assignments and actually placed them in a folder and submitted them to the professor (Observation 24/06/05). Maggie herself indicated that her learning partner was important. The relationship between them was a close friendship rather than the tutor-student relationship of John and his learning partner.

Jenny and Helen also had a friendly relationship with their learning partners, but not as close as that of Maggie and her learning partner. Jenny maintained a close relationship with her learning partner, sharing personal problems and family situations with each other.

Jenny praised her learning partner and indicated that she had been good to her and concerned about her. Helen was friendly with her learning partner, who was really concerned about her academic work, but Helen became more independent in later years as they took different courses.

The “working relationship” style learning partner

The learning partners of Annie, Lily, and Wendy reported that they had only a working relationship with their partners with HI (AL-7, LL-4, WL-3), not a friendship. They were all disappointed with the grade performance and attitude to learning of their partners with HI. As a result, their relationship was formal and they would only do what they were paid for, taking notes in class, and would seldom make contact with them after class. In the interviews conducted for this study, these three learning partners complained about their partners with HI in terms of their academic work and attitude. They did not study hard and the learning partners felt frustrated.

Annie's learning partner only worked with her in her fourth year (AL-2). Lily's learning partner mentioned that she did not have a good relationship with Lily in their first year, because she found that Lily relied on her too much (LL-5). Wendy's learning partner was disappointed by her lack of interest in her learning and they only communicated during class (WL-5).

The learning partners demonstrated different types of relationships with their partners with HI. Most of the learning partners felt that they had a good working and cordial social relationship with the students with HI. The relationship seemed to depend on the grade achievement and attitude to learning of their partners with HI. The learning partners seemed to want to help and encourage their partners with HI, and those who did not see progress became frustrated.

*The Learning Partners' Opinions Concerning their Partners with HI**Individual characteristics of the students with HI*

The learning partners had different opinions of the individual characteristics of their partners with HI. According to the learning partners' comments, there are two kinds of students with HI. One kind demonstrated academic independence (John, Annie, and Helen). The other type was academically dependent, relying on their learning partner too much (Jenny, Lily, Maggie, and Wendy). They all agreed that students with HI should learn to be independent and not depend on their learning partners all the time. The learning partners could not do everything for them and were themselves students, not professional teachers.

John's learning partner said that he had an independent, out-going personality, and showed initiative in his learning and his making friends (JL-3). Annie's learning partner similarly felt that she was also academically independent and only asked for academic support (AL-7). Helen's learning partner also thought that she did not rely on her too much and was quite optimistic and seemed happy all the time (HL-11). Maggie's learning partner thought that she, like John, was more outgoing than some other students with HI (ML-9).

Jenny's learning partner felt that she was not academically independent, and was shyer than her classmates with HI. She thought that Jenny relied on her too much at the beginning and needed to become more independent (JIL-2). Lily's learning partner also felt that she should become more independent in her learning and found that she improved and became more independent in her second year (LL-5). On the other hand, Wendy's learning partner felt that her attitude showed a lack of interest in her university life (WL-3).

The learning partners felt that John and Annie were academically independent and that John showed initiative in becoming socially integrated with hearing peers. It appeared to the learning partners that the others relied heavily on them for academic support and were socially isolated from their peers.

The academic integration of the students with HI

According to Tinto (1993), academic integration is linked to students' grades. The participants with HI in this study fell into three categories in terms of academic grades: excellent, average, and poor. John's performance was excellent. His learning partner was satisfied with the engagement and grade performance of John. John was motivated to study, and he would take the initiative in asking his learning partner questions after class (JL-2).

The grade performances of Annie, Helen, Jenny, and Maggie were average. The learning partners of Annie, Jenny, and Maggie pointed out that they did not work hard enough. Helen's learning partner observed that she worked hard, but was still an average student.

The grade performances of Lily and Wendy were poor. Lily's learning partner said that Lily did not take the initiative in studying by herself. Neither of them had developed good study habits and both relied too much on their learning partners.

The learning partners stated that their partners with HI had difficulties with art theory courses, and they thought that the students with HI needed to read more art books by themselves. Other than John, the learning partners thought that their partners with HI would improve their grade performance if they worked hard. John appeared to be the only fully academically integrated.

Social integration of the students with HI

The learning partners were of the opinion that students with HI should not isolate themselves into small groups and they should learn to interact with hearing students. With the exception of that of John, they stated that their partners with HI seemed to spend a lot of time with other students with HI after class.

Only John's learning partner found him to be socially integrated with his hearing peers, likely because he was motivated to interact with them, as the only student with HI in his program. He took the initiative to interact with his hearing classmates, and behaved as though he did not have a disability (JL-3). Annie, Helen, Lily, Jenny, Maggie, and Wendy, according to their learning partners, mostly socialized with other students with HI, especially if there was another student with HI in the same class (Annie, Jenny, Helen, and Maggie). These participants were socially isolated from their hearing peers, apparently because they did not try or their hearing peers did not communicate directly with them.

The problems experienced by the learning partners

The learning partners discussed the difficulties they experienced with their partners with HI. They all agreed that they could not do everything for their partners with HI. Their partners with HI needed to learn to be independent and all the learning partners except that of John thought that they had to take the initiative in seeking help from hearing classmates using writing. As the learning partners were also students who followed the same courses, they were concerned about the quality of help they were able to offer their partners with HI, especially in the art theory courses. Another point is that most learning partners (except that of John) worried that their notes were incomplete and probably difficult to read for their partners with HI. Interestingly, the partners with HI

never complained about the quality of notes taken for them.

Annie's learning partner found it was a problem for her to take notes in art theory courses, because she had difficulty in expressing the concepts in words (AL-5). She suggested that Annie read art books by herself, but she found that Annie did not like to read and did not like to copy notes (AL-6).

Helen's learning partner reported that she found it difficult when professors used slides, and she did not know how to describe each slide in the form of notes. She also reported that her notes were incomplete and disconnected and feared that Helen would not understand them (HL-2). She hoped that Helen would read more books on art theory. She also thought that the artwork of students with HI tended to show superficial skill; they needed more depth and understanding about art, which could be obtained by doing the extra readings (HL-9).

Jenny's learning partner thought that she could only write down the important points in class, and admitted that the important points alone were not enough to really understand the subject. As a result, Jenny had to rely on herself (J1L-4). Jenny needed help mostly in the art theory courses, because these courses were difficult and sometimes even the learning partner did not understand. Her learning partner suggested that Jenny read art books to supplement the course notes (J1L-2).

John's learning partner thought that he needed to do some things by himself. He thought that no learning partner could meet all the needs of a student with HI, due to the limited ability of the learning partner. His learning partner also reported that John required help in art theory courses because the professors spoke more in these courses. Practical courses on the other hand, were fine for him, because he could use sight and touch to learn about the artwork (JL-2).

Lily's learning partner sometimes felt helpless, especially in the first two years. She did not know how to teach Lily and felt very taxed as a learning partner, because she had to concentrate on listening to the lectures and taking notes. She also needed to answer Lily's questions at the same time, even though she was new to the course herself. Art theory courses were difficult for everyone, and Lily needed to find books to read by herself (LL-4).

Maggie's learning partner found when the lectures were boring, she still had to sign for Maggie. She said that, if she did not sign, Maggie would daydream. She also remarked that she could not help Maggie with her academic work, because she did not have enough time and did not understand the courses well enough herself. However, she wanted to help Maggie as much as possible, but she could not teach her everything step-by-step and could only give Maggie suggestions and encouragement (ML-5).

Wendy's learning partner found it was difficult for her to make notes in art theory classes because she would take down notes without understanding the lecture and was afraid that Wendy would not understand them either. While she was focusing on taking down notes in class, Wendy was bored and would play, daydream, or even doze off (WL-2). She also reported that she felt helpless and disappointed with Wendy's learning attitude and her academic performance. Wendy's learning partner did not expect much from her because Wendy did not work hard (WL-4).

The comments of the learning partners indicated that the quality of their course notes was linked to their ability to understand and express the content of the lectures. The learning partners also felt that the students with HI should take the initiative to do the course readings to gain further understanding.

Summary

The hearing partners felt that the students with HI relied heavily on them for academic support which was limited by the learning partner's own grasp of the subject matter. They agreed that doing well in courses was linked to the amount of individual effort the students with HI put into their studies, rather than the amount or quality of assistance provided by the learning partner. The learning partners also noted that the students with HI were generally socially isolated. Hence, according to the learning partners, the academic characteristic of personal effort and the desire to socialize with hearing peers influenced the integration of the students with HI.

The Professors

All the professors indicated that they had at least five years experience teaching students with HI. They also reported that they had all attended several discussion meetings held by the Centre for Counselling Services. There were two types of professors. The first type (Professors A, B, and D) were formal and distant in approach and the second type (Professor C) treated students with HI as though they were his own children and gave them more feedback and help. He preferred to emphasize the best parts of their work and give them positive feedback (PC-4). He would make the effort to track down students who were having problems in art, and offer them help (PC-2). Helen, Jenny and Wendy in their interview referred to Professor C as the instructor they liked best. They asked him many questions, and found that he was nice and helpful, and said that all the students with HI in the fine art faculty liked him. They observed that the other professors would assume that the learning partners were helping them.

Personal Characteristics of Students with HI

The four professors had several years teaching experience with students with HI

and they all taught compulsory courses (art courses) in the faculty. In general, they agreed that the personality of students with HI was an important factor influencing their learning and that students with HI who were out-going and demonstrated initiative were more successful at university.

Professors A, B, and C thought that some students displayed initiative and were outgoing, but others were not. The professors stated that some students with HI would ask them questions directly, but mostly they would ask indirectly, through their learning partner or classmates. Professor B thought that those students with HI who showed initiative received more feedback and therefore did better. For those who did not, he had to take the initiative himself and show concern about their learning. He thought that taking the initiative in learning was very important for students with hearing impairment (PB-2). Professor C thought that students with hearing impairment needed to assert themselves so that their performance may improve.

On the other hand, Professor D thought that students with HI held a pessimistic outlook, and tended to isolate themselves, which may have had a negative effect on their learning. He added that they rarely took the initiative, and tended to socialize among themselves. He pointed out, however, that some did show initiative. He thought that personality was more important than good basic art skills. If they were outgoing and optimistic, they demonstrated high motivation in learning, and showed initiative in asking professors or classmates questions, they were able to keep up and do better in their courses (PD-1).

In summary, there was agreement among the professors that those students with HI who took the initiative to ask questions to clarify information tended to do better than those who did not. As well, the individual personalities of the students with HI influenced

the amount of contact they had with the professor.

Grade Performance of the Students with HI

Academic integration is linked to achievement (Tinto, 1987), and the professors reflected on the achievement of the students with HI. Professor A thought that the performance level of students with hearing impairment was much lower than that of hearing students in their first year. He added that they could improve if they developed good learning skills and studied hard. On the other hand, he complained that some students with hearing impairment did not study hard and thought that professors should take pity on them because of their condition (PA-3).

Professor C claimed that the art performance of students with HI would not be lower than that of hearing students if they studied harder. He also mentioned that the learning attitude of students with HI varies and depends on their level of motivation. He added that a friendly and supportive atmosphere in class is important for them (PC-4).

Unlike the other instructors, Professor D was of the opinion that the ability of most students with HI was lower than that of hearing students. They did not understand the lecture immediately, even when the professors make an effort to accommodate for their needs. He considered that he had encountered few excellent students with HI and that they do not have solid basic art skills. He also thought that students with HI do not put much effort into their studies, and their feeling for art is not very good. As a result, their achievement was poor (PD-1).

In summary, the professors held different opinions of the academic ability of the students with HI that varied from adequate to sub-standard. It appeared that taking the initiative to ask questions, study habits, motivation, classroom climate, and level of basic art skills affected their performance.

Accommodations for the Students with HI

Professor A reported that he gave students with hearing impairment higher marks if they had problems in art theory courses, particularly if he was using many slides in class. He also pointed out that he would pay attention and show concern and checked on them through their learning partners. Sometimes he even helped them review the course material if they were not doing very well in the courses (PA-2).

Professor B stated that he would take into account the effort each student put into the course in the final mark, but he treated them the same as hearing students in assignments and tests (PB-3). Professor C did not reveal how he accommodated students with HI, saying only that he preferred to emphasize the best aspects of their work and gave them positive feedback. He also mentioned that he asked students with HI to meet with him, especially when they were doing artwork. Therefore, he took the initiative in helping those students who had problems in their art work (PC-3).

Professor D commented that he asked the learning partner to write down what he said about the work of the student with HI. He also asked both of them to come to his office once a week and gave them extra help, as he was concerned about their academic and campus life. Additionally, he stated that he would consider lowering his own standards for students with HI and raise their marks because they took a different entrance exam from that of the hearing students. The most important issue for him was whether the students with HI were showing improvement or not. He observed that their improvement depended on how much effort they put into their work. (PD-3).

In summary, most of the professors stated that they provided assistance to students with HI outside of class hours. Two professors also admitted that they adjusted the final marks of these students.

Observations of professors' teaching

I observed a professor showing slides to a class. She was not one of the professors interviewed in this study, but Wendy and Helen attended this class and I wanted to observe. I considered this art professor's teaching style to be particularly unhelpful for students with HI, because the classroom was dark and it was hard to see the blackboard, and she spent most of the class speaking. The professor explained to me that this was her first year teaching, and she had never taught students with HI before. She also indicated that her teaching materials were not yet well organized. She said that there are no Chinese books published on this subject (Reflective journal, 08/06/05). From this incident, it became apparent that a professor's teaching style, experience, and resources influenced the learning of students with HI.

I also observed a modern art course in which the professor switched off the lights and showed one artist's pictures on the overhead screen. As she lectured, she wrote down the important points on the blackboard in Chinese and English. Wendy's learning partner was busy writing notes, but sometimes she had difficulty writing, because it was dark in the classroom. Sometimes she had to look at a neighbouring classmate's notes. Both Helen and Wendy seemed bored because they could not see the instructor's lips and there were no written notes to follow. The learning partner was busy writing notes and tape-recording the lecture. During this time, Wendy doodled and later dozed off. Sometimes they even chatted to each other using written notes (Observation, 08/06/05).

I also observed Wendy and Helen in one introductory course, and their professor told me that both of them studied hard and their progress was good (Observation, 01/06/05). I noticed that she used pictures, put the important points on overheads, and wrote down the key words on the blackboard as she lectured. This enabled Wendy and

Helen to concentrate on the lecture. I think this teaching method of using multiple visual aids is helpful for students with HI (Reflective journal, 01/06/05).

Summary

The professors felt that students with HI could achieve good marks if they put concerted effort into their work. They also mentioned that taking the initiative in asking questions of the professors is another important factor in improving their academic achievement. As well, some professors stated that they do make accommodations for students with HI, especially in some theory courses, and the instructors' teaching affected the learning of students with HI.

The Personnel from the Centre for Counselling Services

I interviewed two people (A and B) from the Centre for Counselling Services, and they both reported that they had worked there for more than two years. The Centre for Counselling Services interviews every student with HI once or twice in the semester. They focus on first year students with HI in order to help them with their academic and social life. They also meet with the learning partners, and hold some activities for them so that they can share their experiences with each other. Additionally, they arrange day and overnight trips for students with HI or for them and their learning partners together.

To develop a relationship with the students with HI, the Centre for Counselling Services started offering food at every activity in order to attract students with HI to the centre, and they organized more leisure activities, such as movies and games. The Centre for Counselling Services also offered activities for students with HI and their parents, and seminars for all parents with former graduates with HI, so that the students were able to share their experiences in these meetings.

The staff asked the learning partners to report to them if their student with HI had

any problems, such as skipping class or not being able to hand in work on time. The Centre for Counselling Services requested that the professors pay special attention to students with HI and provided professors with some tips to accommodate them. The participants remarked that their professors seldom took the initiative in informing the centre about the academic progress of students with HI in their class. Participant A also observed that they have to contact the professors of students with HI when the students are not doing well (P1-6). Only special class (Chinese and English) teachers reported to them about the progress of their students with HI, probably because all the students in the special classes have HI.

Grade Performance of the Students with HI

Participant A thought that the academic performance of students with HI would not be lower than that of hearing students if they studied hard, and that some of them produce good work. Success, she felt, depends on their individual initiative and enthusiasm (P1-3).

Participant B found that first year students with HI have the most problems, as they have just left home. They also have many courses and assignments, and it is very different from being in high school (P2-5). She also added that if students do not take the initiative in reporting their problems, they do not know that anything is wrong. She recalled one student who did not think of himself as a student with HI and never asked for help from anyone. He skipped many classes and failed several courses. Eventually, he was expelled from the university, and by then it was too late to help him (P2-2).

Social Integration of the Students with HI

The participants felt that peer relationships were problematic for students with hearing impairment because they tend to isolate themselves in small groups, especially

when there are two students with HI in the same class, or if they live in the same dormitory. Participant A felt that students with HI need more help in their peer relationships (P1-3). She thought that if they take the initiative in their interactions with hearing classmates, they could improve their peer relationships (P1-3). She also mentioned that learning partners are able to influence and expand the peer relationships of students with HI, because some learning partners are active and join clubs, and encourage their partners with HI to attend these clubs. However, students with HI who come to the activities indicated that their previous experiences with hearing people had been negative, and they have brought these negative impressions to their life at university. As a result, they are reluctant to interact with hearing students (P1-4).

The Problems between the Centre for Counselling Services and Students with HI

The two staff members reported that students with HI who take the initiative in coming to the centre to ask for help or attend activities are those who fully accepted that they have HI. Some students with slight or mild hearing loss do not identify themselves as students with HI, and, as a result, they seldom seek help or attend activities. Participant B also reported that some hard-working students considered themselves too busy and thought that the activities held by the Centre for Counselling Services would not be helpful for them (P1-1, P2-1).

The Centre for Counselling Services in this university serve both hearing students and students with HI. The staff complained that they had too much work to do and a staff shortage. The Centre for Counselling Services personnel do not know sign language and they only communicate with students using writing. They had a budget and they held many activities for students with HI, but they found that only freshmen students with HI joined activities.

Participants A and B indicated that it is important to establish a good relationship with students with HI in order to offer them counselling, and the Centre for Counselling Services has to take the initiative in establishing a good relationship (P1-8, P2-6). Both personnel felt tired and helpless, because the students with HI did not come to them with their problems, even though they knew from other students or learning partners that they were facing difficulties. The Centre for Counselling Services seems to wait for students to come to them, and probably needs to improve their relationship with students with HI by offering more activities or seminars in which they share their experiences. The students with HI seemed to prefer to be independent and resolve their problems by themselves. All students with HI indicated that they prefer to tell their problems to their “best friend with HI,” or their “learning partner,” or to “resolve their personal problems by themselves” and not tell the Centre for Counselling Services. The students with HI seemed to consider the Centre for Counselling Services as just another department in the university, not as a centre designed to serve their needs. Those who came to the Centre for Counselling Services tended to express concern about academic problems, rather than personal problems (P1-1, P2-1, P2-4).

In summary, the two personnel from the Centre for Counselling Services found that students with HI express some difficulties in their campus life, which include learning and social issues. The Centre for Counselling Services offers many activities and help for these students with HI, but they find that it is important that students take the initiative in asking for help with specific problems because only then can the Centre for Counselling Services offer them help in their adjustment to university life. Otherwise, the Centre for Counselling Services is only able to offer general help.

Summary

Two issues emerged from the interviews with the learning partners, professors, and staff at the Centre for Counselling Services and these pertain to academic and social integration.

Academic Integration

Tinto (1993) reported that academic integration was linked primarily to grade performance. The learning partners and professors agreed that achievement among the students with HI varied. It appeared that it was affected by the initiative and effort of the student, the quality of the notes provided by the learning partner, the availability of a learning partner for each course, and the quality of the teaching of the professor. The professors felt that students with HI should take the initiative to ask them questions to clarify information covered in the lectures. There was agreement among the learning partners and professors that the students who did the course readings to supplement the lecture notes prepared by the learning partners and studied hard earned better grades. Some of the learning partners also felt that their students with HI were too dependent on them and wanted them to take more initiative in their own learning.

The learning partners did their best to provide quality notes, but admitted to having difficulties understanding the course material themselves. The professors offered assistance outside of class and sometimes adjusted final marks. The staff at the Centre for Counselling Services were willing to help, but were rarely asked to provide assistance. Hence, although support and accommodations were provided, it appeared that their effectiveness was dependent upon the quality of the support and the initiative of the students with HI to access it.

Social Integration

The learning partners, professors, and staff at the Centre for Counselling Services felt that the students with HI should make more of an effort to socialize with their hearing peers. The comments of the learning partners showed that only John took the initiative to talk with his classmates. This is probably because John was less self-conscious about his speech and was motivated to socialize. It appeared that the other students were more comfortable socializing with their own small group of peers with HI. The staff at the Centre for Counselling Services felt that previous negative experiences with hearing peers contributed to their reluctance to socialize outside of their tight circle of friends.

This chapter explored the experiences and opinions of the learning partners, professors and personnel from Centre for Counselling Services concerning the individual characteristics and academic and social integration of the students with HI interviewed for this study. All sources agreed that an independent attitude and willingness to take the initiative in academic and social circles would help students with HI be successful in higher education.

CHAPTER 6

CROSS CASE ANALYSIS

Seven university students with hearing impairment (HI) participated in this study. This chapter will present a cross case analysis of their individual profiles and the focus group interview (G). Table 3 will present the results according to the components of the conceptual model.

Individual Characteristics

Family Background

All the participants in this study were the only people with HI in their immediate family, although Lily has distant relatives with HI. Most of the families of the students with HI are typical in Taiwan: the father works outside the home and the mother is a housewife. Only Lily's parents are both unemployed, and this meant that she had to contribute to the family finances from a young age. Helen comes from a more economically secure background, and her parents were very well educated.

All participants except Lily were required to practice speaking by their parents when they were children. Both Helen and Wendy were given speech lessons before kindergarten. Annie had better oral ability than the other participants with HI, and she remarked that this was because her mother pushed her to practice speaking all the time. In terms of the parent-child relationship, Jenny complained that her mother was too controlling and was very strict with her, and as a result she felt under pressure. None of the other students with HI complained about their relationship with their parents. All of them mentioned that their parents were concerned about their academic performance.

In summary, the participants were born into hearing families that were traditionally Taiwanese in structure. Their economic backgrounds varied but most of the students other

than Jenny had a warm relationship with their parents.

Individual Ability

The primary methods of communication varied among the students with HI. Annie, Helen, and Wendy used speech. Annie had the strongest signing and oral skills, which meant that she was able to use speech with hearing people and sign language with students with HI. Helen and Wendy had developed oral ability because they had attended a regular school and became accustomed to speaking. They only learned sign language at university, and were not accustomed to using it. The other participants rarely spoke and mostly used signing. They all mentioned that they needed to use writing to help them communicate with hearing people.

Annie, Helen, Jenny, and John had talent in art, and had studied it for several years. Maggie, Wendy, and Lily were less artistically talented, but mentioned that they showed abilities in other subjects, such as Chinese, English, history or geography. In summary, the students had varying levels of oral communication, and had a range of academic strengths.

Pre-University Experience

Primary school experience

They all had different experiences at primary school: Jenny, Lily, and Maggie studied in a school for students who are deaf; John attended a mainstream class in a regular school; Annie attended both a regular and special class for students with HI, and Helen, and Wendy attended a regular school that had a resource room.

Jenny and Maggie did well academically. Lily recalled that she only did well in Chinese. Annie's performance was excellent in the special class for students with HI, but she could not keep up in the regular class. Wendy and Helen did not do as well because

they had to compete with hearing classmates, but Helen showed artistic abilities and won many drawing competitions. John also competed with hearing students, and did well academically. Generally, the participants did better academically in a classroom environment designed for students with HI.

Junior high school learning experience

Jenny, Lily, and Maggie continued in the same school for students who are deaf for their junior high schooling. Jenny and Maggie continued to perform well academically, while Lily mentioned that she did not study hard, but she got good marks in Chinese. Annie and John transferred to a school for students who are deaf for their junior high schooling. It was a new environment for them, and their first experience of sign language. They found it challenging and did not do well academically. Helen and Wendy attended a regular junior high school, which had a resource room. Neither of them did well academically at this level. Schools for students who are deaf seems to be the best environment for students with HI, but this environment is a big adjustment for those coming from regular primary schools.

High school learning experience

Most of the students (except Helen and Wendy) continued studying in the same schools. Maggie and Lily did well academically, both coming first in their class. Annie, Jenny, and John achieved average grades, and John and Jenny both did well in art. Helen went to a regular private high school and majored in an advertising design program, and Wendy went to a vocational high school. They did well in these classroom environments, despite competing with hearing students, because the subjects were less academic and more suited to their abilities.

In summary, the participants attended different types of schools and some of them

had better academic and art abilities than others. The regular schools encouraged more academic competition and offered less personal support than the schools for students who are deaf.

Motivation to Enter University

All the participants were highly motivated to enter university, but for different reasons: Lily heard that one can learn much more at university; John was influenced by his best friend; Jenny was urged to apply by her mother; Maggie heard that there is a lot to learn at university and that campus life is exciting; and Wendy and Helen were influenced by their siblings and were also encouraged by their parents and teachers. Additionally, they all thought that they could get a well-paying job with benefits if they had a university degree.

Most of them (except Helen) attended a class at high school that prepared individuals for the university entrance exam. They were all influenced and encouraged by their family, teachers, and friends to take the entrance exam, and they all put effort into preparing for the entrance exam.

In summary, the participants shared certain individual characteristics: a good relationship with their family, talent in art or other subjects, successful pre-university learning experience, and highly motivated to enter university, maintain a high average, and earn a degree in order to find a well-paying, stable job with good benefits.

Academic Integration

Grade Performance

Most of the participants selected this art university as their first choice because it is famous in Taiwan and has a good reputation for students with HI in art. Annie, John, Jenny, and Maggie were admitted into the department of their first choice; Helen and

Wendy got into the department of second choice; Lily did not even select this university as her first choice, as she really wanted to study social sciences.

All of them thought that studying at university was different from, and much harder than, studying in high school. Annie, Lily, and Helen stated that high school teachers would prepare materials for them and tell them the important points. However, at university they had to study and learn on their own.

All students agreed that Chinese, English, and computer courses at primary and secondary school levels are important for students with HI for a university education. John said that pre-university schooling should also emphasize oral communication ability. Annie complained that the professors criticized the methods they learned in high school, and Lily added that they had to study subjects that were entirely new to them at university. Jenny said that they were not able to learn a lot at high school, because they had had to focus on the entrance exam (G-7).

First year grade performance

All the HI students thought that their first year at university was an ordeal, because they lack autonomy. They all remarked that they had to study hard and devote more time doing the course readings. Both compulsory and introductory courses were difficult for them. Helen had taken art courses in high school, but she found it was different and harder at university; Lily and Maggie also found that some compulsory courses, such as design courses and Chinese art, were new for them; Helen, Maggie, and Wendy reported that some introductory courses were difficult for them, especially psychology.

Every student with HI chose a classmate as his or her learning partner for academic assistance. The learning partner had to choose the same courses as their partners with HI in the first year. Most of the students with HI, other than Annie and Wendy, had learning

partners who helped them by taking notes during the class. Annie's and Wendy's learning partners often skipped classes, and as a result they did not receive much help. Other than John, Annie, and Wendy, the students with HI commented that they relied heavily on their learning partners to help them in their first year of study.

Preparing essay assignments was the most difficult task for them because they had not learned how to write an essay in secondary school. Annie, John, Wendy, and Maggie received assistance from their learning partners; Helen had help from her mother; and Lily received some help from her older classmates with HI. They all reported borrowing other classmates' essays for reference.

All of them thought that their academic performance was disappointing in their first year. Annie, Jenny, John, and Maggie had an academic average over 80%, but Helen, Lily, and Wendy had an average under 80%.

Second year grade performance

Most of the students with HI (Helen, Jenny, John, and Maggie) found it difficult in the second year, because their learning partners did not take the same courses. Learning partners are not required to choose the same courses as their partners with HI in the second year, which meant that the students with HI needed to rely more on themselves, or ask for help from other hearing classmates. They would ask for help from other hearing classmates or asked the professors after class. John was the only one who did not ask for help from hearing classmates, because he thought that they were not trained to help HI students, and this meant that he usually studied by himself.

Only John felt that he was improving in his learning. Helen, Lily, and Maggie felt it was harder and there was more work than in the first year; Wendy admitted that she had not worked hard and, as a result, she failed two courses, and Annie did not pay attention

to her work and skipped some classes. John, Jenny, and Maggie maintained their over 80% grade point average; Annie's fell to below 80%; and Helen, Lily and Wendy remained below 80%.

Third and fourth year grade performance

Four of the participants (John, Jenny, Helen, and Wendy) reported that their academic achievement improved in the third and fourth years. The others (Annie, Lily, and Maggie) were not working hard, and as a result did not earn a high academic average. John was the only one to state that he was getting used to studying at university and his grade point average was still over 80%. Jenny continued working hard and her grade point average was 80%. Helen felt that her grade point average had improved in her third year, and she earned 81% in the first semester, despite difficulties in some art courses; Wendy paid more attention to her academic work because she did not want to fail any more courses. Maggie did not study as hard as before, because she found some courses to be difficult. She spent more time chatting on the internet than studying. However, her grade point average was 80%. Annie was still skipping classes because of personal problems, but she paid more attention in the second semester of her third year. Lily's academic performance was poor. She found the work harder, failed three courses, and her average was 70%.

In summary, the students stated that they had to adjust to the workload at the university level and although they had the assistance of the learning partners, they were disappointed with their marks. In their second year, most students did not have the same level of support from their learning partners as in the previous year and their marks were again not as high as they would like them to be. However, during the third and fourth years, four of the participants reported that their marks improved. They had put in the

extra effort and learned how to study on their own. The remaining three were distracted by other things and said that they did not work very hard, and their marks were not as high as their peers with HI.

Interaction with Faculty

All the participants felt that the professors in their department were caring and good teachers. Helen, Jenny, and Wendy mentioned that Professor C in particular was kind and helpful to students with HI. When meeting with students with HI after class, Professor C would write down important points that he had made during the lecture.

All the participants except John were hesitant to ask the professors when they had questions. John took the initiative to ask for help from his professors. Helen and Wendy sometimes asked the professors questions after class when their learning partners were not present, but mostly they asked introductory course professors. Maggie stated that she mostly asked for help in the first and second year and if her learning partner was absent. Jenny asked the professors questions about art in her second and third year. Lily only asked a professor for help twice by herself. Annie, however, seldom asked the professors questions, and would ask other HI classmates instead if they were in the same course.

In terms of teaching style, they all thought that most of the professors in the introductory courses did not pay any attention to students with HI. The professors spoke too quickly and seldom wrote down the important points on the blackboard. They also thought that it was helpful when professors used overheads. Professors who used visual aids, were willing to answer questions, showed examples of finished projects, and gave extensions helped the students achieve higher marks and increased academic integration.

The participants with HI made suggestions to improve university teaching for students with HI. They all agreed that they would study harder if professors paid more

attention to students with HI. John wanted professors to give students with HI an outline, or even a complete copy, of the lectures, because the learning partner cannot write everything down. Lily felt that the university should provide a laptop computer for the learning partners to take notes quickly in class. Maggie suggested that the professors' words could appear as a caption on a screen as they speak, so that students with HI can see the words (G-5).

In summary, professors expected students to ask for assistance and they would help. Students felt that the professors should ask them if they had any problems. The Centre for Counselling Service, on the other hand, did take the initiative to offer help, but no students were interested. The learning partners expected to take the lead in offering assistance; however, the quality and quantity depended on the learning partner's grasp of the subject matter and the amount of effort given by the students with HI.

Quality of Effort

Helen, Jenny, John, and Lily reported that they spent a lot of time studying. Helen studied 70% of the time available for study, and the other 30% she spent with her leisure activities such as shopping and internet chatting. Jenny thought that she studied much harder than when she was at school for students who are deaf and was satisfied with her academic performance. Lily felt that her academic performance was average, and that she studied hard 70% of the time available for study, and other 30% she spent chatting. John spent at least four hours a day studying, because he wanted to compete with hearing students. Annie, Maggie, and Wendy reported that they did not study hard at university: Annie stated that she did her assignments or fine art projects at the last minute and only studied hard 40% of the time available for study; Maggie felt that she had not spent a lot of time studying at university compared with high school, and thought that she

only studied hard 60% of the time available for study; and Wendy thought she had not worked hard sometimes and only studied before exams.

In terms of academic integration, grade performance varied, depending on their individual effort, and some of them improved over time. John, Jenny, Maggie, and Helen maintained an academic average of 80% or more, whereas Wendy, Lily and Annie had lower averages. The degree of interaction with the faculty and the quality of teaching style, particularly after the first year, may also have influenced academic integration.

Social Integration

Interaction between Students with HI and Hearing Students

All of the students with HI valued interaction with hearing peers, but only John actually socialized with them. He took the initiative to interact with hearing peers because he was the only student with HI in his department and he was not embarrassed by the quality of his voice. Additionally, he was reluctant to socialize with the other students who had HI because they did not help him improve.

The other students, with the exception of Annie, interacted with their classmates to obtain course information and assistance, particularly after their second year. They claimed that communicating with hearing peers other than their hearing partners was difficult because hearing students did not want to communicate by writing notes. These students were also shy about speaking to hearing peers. While MSN and cell phone text messaging facilitated interaction with hearing peers, most of the students only socialized with their small group of friends with HI.

Extracurricular Activities

Helen, Jenny, John, and Wendy did not attend any extracurricular activities in their four years at university, because they were busy studying. The other students with HI

attended clubs when their learning partner invited them along: Annie only attended a club for one semester; Lily went to a club in her first two years; and Maggie started to attend a photo club in her second year, but quit in her third year. Therefore involvement in extracurricular activities was limited for the students with HI.

In summary, except for John, the social integration of the students with HI into the larger student body was limited. Perceptions about differences in communication methods with hearing peers and embarrassment about speaking were barriers to social integration. However, technology facilitated interaction with hearing peers. Although most of the students did not socialize with their hearing peers and did not participate extensively in extracurricular activities, they were not necessarily poorly socially integrated. Except for John, they seemed to belong to a tight group of peers with HI on whom they relied for academic support and opportunities to socialize.

Support Services

Special Classes

Five of the participants with HI reported that the English class was easy and the Chinese class was difficult. Annie, Jenny, and Maggie thought that these special classes were helpful for HI students, but Wendy preferred to take classes with hearing students.

Learning Partners

The students with HI agreed that the learning partners provided an important service. They took notes in class, answered questions, helped them ask questions of professors, and assisted them in essay writing. It appeared that the support provided by learning partners contributed to their academic integration.

However, some students with HI had concerns about their learning partners. Two students felt uncomfortable with their learning partners because they would criticize them.

Additionally, some learning partners skipped classes and consequently did not provide course notes consistently. As a result, all of the students stated that they would recommend to younger students with HI to choose a conscientious learning partner.

The Centre for Counselling Services

All the students attended activities offered by the Centre for Counselling Services in their first year, but in the following years they only attended if the activities seemed interesting or important to them. They all reported that they never came to the Centre for Counselling Services to ask for help with personal problems, preferring to resolve them on their own.

In summary, the support services were helpful, and the learning partner was the most important service influencing students with HI. Most of them received a lot of support from their learning partner, especially in their first year. All students seldom asked for help from the Centre for Counselling Services, especially for personal problems.

Goal Commitment and Institutional Commitment

All of the students with HI indicated that it was important for them to earn a university degree in order to get a good job that paid well, was stable, and offered benefits. Therefore, they were all motivated to pass their courses and complete their programs. Annie, Helen, Jenny, and John observed that they liked this art university and would choose it again. Lily, Maggie, and Wendy stated that they would select another university if they had the chance again, because they felt they were not talented in art. Jenny and Maggie had considered dropping out of university in their first and second years of university respectively, because there was too much work and pressure for them. They all reported that it would be a “pity,” or a “waste of time,” or a “shame” to drop out of university, and as a result they all persisted in their studies until graduation.

The participants held divergent ideas about the benefits of university education. John said it was learning art skills; Maggie and Lily thought university helped them learn to interact with hearing peers; Jenny said it would be easier to find a job; and Lily and Annie stated that university expands one's outlook and knowledge. Other than Wendy and Maggie, they felt that studying at university made them more confident. To conclude, all students had strong goal commitment in getting a university degree and finding a well-paying, stable job with good benefits afterwards, and even though not all of them liked this art university, they persisted and completed their programs (G-1).

The participants with HI may be divided into three groups fitting the conceptual model of persistence for students with HI (Figure 1). John is the only student to fit the model completely; Helen, Jenny, and Maggie fit the model to some degree; and Annie, Lily, and Wendy fit the model only slightly.

They all shared the same positive characteristics and strong goal to graduate. John also demonstrated excellent academic and social integration, and benefited most from the provision of the learning partner. Those four factors led to strong goal and institutional commitment and influenced him to persist with his degree.

Helen, Jenny, and Maggie fit the SIM to some degree. Their academic integration was relatively strong, and they benefited from the provision of the learning partners, but their social integration was poor, as they isolated themselves in groups with students with HI. They demonstrated strong institutional and goal commitment. These positive factors led to their persistence, even though their social integration was poor, particularly with hearing peers.

Annie, Lily, and Wendy do not fit the model. Their academic and social integration were limited and they did not benefit significantly from the provision of the learning

partners. However, their individual characteristics were positive and they had very strong goal commitment that led them to persist with their studies.

Summary

A cross case analysis of the participants according to Tinto's (1993, 1997) revised model of persistence for students with HI (Figure 1) is presented in Table 3. In terms of individual characteristics, all the students with HI come from a hearing, supportive family. They used different communication methods and came from different educational backgrounds, and they showed different levels of ability in literary and art subjects. All had good pre-university academic performance, and strong motivation to enter university, and they put effort in their learning in high school.

In terms of academic integration, the participants showed different levels of individual effort in their learning, but overall their grade performance was average. John achieved high marks and showed good interaction with the faculty. However, Annie, Lily, and Wendy were not as well academically integrated because of their lower marks and their limited interaction with professors.

With respect to social integration, all of the participants except John were only partially socially integrated, because they only made friends with students with HI. As well, most of them did not attend extra-curricular activities or join clubs.

In terms of support services, most of the participants found the learning partner to be the most important among the support services. John seemed to benefit the most from his learning partner. All of them (except Annie) found the learning partners very helpful in their studying at university. They mostly found the special classes to be useful, but the English class was easier than the Chinese class. They did not go to the Centre for Counselling Services for help with personal problems.

In terms of goal commitment, they were all highly motivated to earn a university degree and find a well-paying, stable job with good benefits, and most of them had high institution commitment. The data showed that goal commitment (the motivation to graduate and get a well-paying, stable job with good benefits) was an important factor contributing to their persistence (see Table 3).

Table 3.

Summary of cross case analysis

Participants	Individual Characteristic			
	Family Background	Individual Ability	Pre-University Experience	Motivation to Enter University
Annie	Hearing family, Family is supportive	Oral communication	Regular and special classes; school for deaf students; good at art	Won scholarship to enter university
Helen	Hearing family, but brother is HI. Family is supportive	Oral communication	Pre-kindergarten speech training; regular school with a resource room; good at art	Influenced by siblings and encouraged by parents and teachers
Jenny	Hearing family, tense family relationship. Family is supportive	Sign communication	School for deaf students; good academic performance	Forced by mother to enter university
John	Hearing family Family is supportive	Total communication	Mainstream class and school for deaf students; good at art	Influenced by his best friend
Lily	Inherited hearing loss, immediate family hearing; low-income family. Family is supportive	Sign communication	School for deaf students; good academic performance	Encouraged by teachers to enter university
Maggie	Hearing family. Family is supportive	Sign and writing communication	School for deaf students; good academic achievement; good literary subjects	Wanted to learn more and was attracted by campus life
Wendy	Hearing family. Family is supportive	Oral communication	Pre-kindergarten speech training; regular school with resource room	Influenced by her sisters and encouraged by parents and teachers

Summary of cross case analysis

Academic Integration			
Participants	Grade Performance (Academic average)	Interaction with Faculty	Quality of Effort
Annie	75-85%	Seldom	Worked hard 40% of the time
Helen	Below 80%, but improved in the third year	Mostly in introductory courses	Worked hard 70% of the time
Jenny	80%	In art classes in the second and third years	Worked hard 70% of the time
John	Over 80%	Took the initiative, but not in introductory courses	Worked hard most of the time
Lily	70%	Only twice	Worked hard 70% of the time
Maggie	83-85%	Mostly in the first and second year when her learning partner was not there	Worked hard 60% of the time
Wendy	Below 80%	Mostly in introductory courses when her learning partner was not there	Only worked before an exam

Summary of cross case analysis

Social Integration		
Participants	Peer Interaction with HI and Hearing Students	Participation in Extracurricular Activities
Annie	Mostly interacted with students with HI	Joined clubs
Helen	Mostly interacted with students with HI	Never joined clubs
Jenny	Mostly interacted with students with HI	Never joined clubs
John	Mostly interacted with hearing students	Never joined clubs
Lily	Mostly interacted with students with HI	Joined clubs
Maggie	Mostly interacted with students with HI	Joined clubs
Wendy	Mostly interacted with students with HI	Never joined clubs

Summary of cross case analysis

Support Services			
Participants	Special Classes	Learning Partner	Centre for Counselling Services
Annie	Found them helpful	Did not find learning partner helpful	Did not go to ask for help with personal problems. Only went to some activities
Helen	Learned more in Chinese than in English	Found the learning partner helpful only in the first two years	Did not go to ask for help with personal problems. Only went to some activities
Jenny	Found them helpful	Found the learning partner helpful	Did not go to ask for help with personal problems. Only went to some activities
John	English class was not helpful, but the Chinese class was helpful	Found the learning partner helpful	Did not go to ask for help with personal problems. Only went to some activities
Lily	English class was easier than Chinese	Found the learning partner helpful only in the first two years	Did not go to ask for help with personal problems. Only went to some activities
Maggie	Found them helpful but would prefer to take them with hearing students	Found the learning partner helpful	Did not go to ask for help with personal problems. Only went to some activities
Wendy	Found it not helpful to have HI students together. Found the English class easier than Chinese	Was not comfortable with learning partner	Did not go to ask for help with personal problems. Only went to some activities

Summary of cross case analysis

Participants	Goal Commitment	Institutional Commitment	Persistence
Annie	Strong goal commitment to graduate and get a good job with benefits	Liked this university and would choose it again	Never considered dropping out
Helen	Strong goal commitment to graduate and get a good job with benefits	Liked this university and would choose it again	Never considered dropping out
Jenny	Strong goal commitment to graduate and get a good job with benefits	Liked this university and would choose it again	Considered dropping out in her first year, but thought her mother would be angry
John	Strong goal commitment to graduate and get a good job with benefits	Liked this university and would choose it again	Never considered dropping out
Lily	Strong goal commitment to graduate and get a good job with benefits	Would rather have been at another university	Never considered dropping out
Maggie	Strong goal commitment to graduate and get a good job with benefits	Would rather have been at another university	Considered dropping out in her second year, but insisted on finishing
Wendy	Strong goal commitment to graduate and get a good job with benefits	Would rather have been at another university	Never considered dropping out

CHAPTER 7

DISCUSSION

The 1984 law passed in Taiwan giving students with disabilities the right to attend post-secondary institutions led to an increase in the number of students with hearing impairment enrolled in post-secondary institutions (Ministry of Education, 2001). Although students with hearing impairment now have greater opportunities to enroll in universities and colleges and are provided with support services such as special classes, a learning partner and counseling, they nevertheless experience difficulties in their academic and social life on campus. Many find it difficult to keep up with the demands of their studies. Their inability to cope is largely due to their limited language ability and a sense of isolation from their hearing classmates (Hsiao, Hsu & Wu, 2001). However, despite their difficulties, some students with hearing impairment do persist in their studies and graduate, and their university learning experiences and the reasons for their persistence in their studies need to be explored.

Conceptual Model

Tinto's (1975, 1987) Student Integration Model (SIM) describes three factors that predict persistence or departure. According to this model, a student comes to higher education with a range of individual characteristics (e.g., family social status, secondary-school performance, individual ability) and goal commitments (e.g., highest degree expected, importance of graduation). These individual characteristics and initial levels of commitment affect the degree to which an individual becomes integrated into the institution's academic and social systems. Academic integration consists of academic performance and interaction with faculty and staff, while social integration includes peer-group interaction and extracurricular activities. According to Tinto (1987), the

greater the individual's level of academic and social integration, the greater his/her subsequent level of commitment to the goal of college graduation and to the institution of attendance.

The conceptual model for this study was a revised version of Tinto's 1993 and 1997 model. This revised version includes four factors leading to the students' goal and institutional commitment affecting their persistence, three of which are included in Tinto's SIM (individual characteristics, academic integration and social integration) (see Appendix B). The revised version of this model used in this study of students with HI includes a fourth additional factor: support services (e.g., special classes, learning partners and the Centre for Counselling Services) (see Figure 1).

The Purpose of this Study

The purpose of this study was to explore the educational experiences of Taiwanese students with hearing impairment, the obstacles they had to overcome, and the factors that led to their persistence in their studies. The research addressed the following questions: (1) What were the past and present educational experiences of students with hearing impairment enrolled in post-secondary studies in Taiwan? (2) What were the facilitators for the completion of their program? (3) What were the barriers to the completion of their program? (4) Why did these students persist in their studies?

A qualitative, phenomenological, multiple case study approach was used to investigate this study. The participants were third and fourth year university students with hearing impairment and they were recruited from a university with a focus on the arts in the north of Taiwan. This university has more students with HI than any other university in the country and it offers support services, such as special Chinese and English classes in the first year of university, learning partners, and the Centre for Counselling Services

for students with HI. The following data collection methods were used: observation, individual interviews, focus group interviews, and interviews with professors, hearing partners, and personnel from the Centre for Counselling Services.

Summary of Findings

This study demonstrated that all participants possessed positive individual characteristics, including family support and high marks in high school, and they demonstrated a solid pre-university academic performance. They were personally highly motivated to enter university. They were not all academically well integrated. In terms of academic integration, grade performance, and individual quality of effort were the most important factors, as they did not often interact with professors. The importance of grade performance is consistent with the findings of studies conducted by Stinson and Walter (1997) and English (1993). English evaluated a model of persistence using students with HI at a variety of postsecondary programs alongside hearing peers. She found that students with higher grades were more likely to persist with their studies.

The provision of a learning partner was a helpful support service provided for the students with HI. This finding is supported by earlier research (Chang, 1999; Kao, 1995; Luckner & Stewart, 2003; Rogers, Muir & Evenson, 2003). Their persistence was also influenced by their strong goal commitment (the person's willingness to work toward the attainment of personal education goals) to graduate and obtain a well-paying, stable job with good benefits. Strong goal commitment seems to make up for deficiencies in other areas, like academic performance (for example, Annie, Lily, and Wendy failed courses, but had strong goal commitment).

In this art university, the dominant culture is that of hearing students, and there are very few students with hearing impairment. Those participants whose pre-university

learning experience was in schools for students who are deaf (all the participants except Helen and Wendy) had very little previous experience of interaction with hearing students and were not used to a hearing environment. They felt they could not understand each other. The hearing students around them also had little or no experience interacting with students with HI, and there was a communication gap.

Social integration and interaction with hearing students were not very strong factors in their persistence, because most of the participants kept to their small groups with other students with HI. They seldom made friends with hearing students or joined university extra-curricular activities. This finding supports the work done by previous researchers (Brown & Foster, 1991; Foster & Brown, 1989; Hsiao, Hsu & Wu, 2001; Stinson, Scherer & Walter, 1987; Stinson & Walter, 1992, 1997).

Furthermore, Tinto's SIM may be considered culturally biased in his emphasis on social integration. Social integration is heavily promoted in North American post-secondary institutions, whereas Taiwanese post-secondary institutions place considerably greater significance on the grade performance of all students. The persistence of students with HI in this study seems more related to grade performance than to social integration, and this experience is, in fact, shared by hearing students. Therefore, the importance of social integration in Tinto's SIM relates to North American, not Taiwanese, culture.

To conclude, individual characteristics (pre-university academic achievement, motivation to enter university, and family support), academic integration (grade performance and individual quality of effort), the support services (including the learning partner), and goal commitment (the motivation to graduate and get a well-paying, stable job with benefits) were important factors leading to persistence. Social integration had

little influence on persistence. The findings of this research add another factor to Tinto's model: the support services, which were found to influence the persistence of students with HI. However, as a whole, this study only partially supported Tinto's model, which claims that the level of social, as well as academic, integration affects persistence (Tinto, 1987).

The Research Questions

This study sought to answer the following research questions:

Research Question 1 - What were the past and present educational experiences of students with hearing impairment enrolled in post-secondary studies in Taiwan?

Pre-University Educational Experiences

All the participants came from supportive families who treated them like hearing children. Hence, supportive relationships with their families contributed to the motivation of the students with HI. This finding is consistent with recent studies (Chang, 1999; Kao, 1995; Luckner & Stewart, 2003; Rogers, Muir & Evenson, 2003), in which the successful graduates with HI came from traditional Taiwanese families (fathers working outside the home and mothers as housewives) and whose parents encouraged them and treated them like hearing children.

The participants achieved high grade performance in academic and art subjects in their primary, junior high, and high schools. They demonstrated high motivation to enter university and hoped to get a university degree in order to find a well-paying, stable job with good benefits. All of them put in a lot of effort to pass the entrance exam, which they had to take in order to be admitted to post-secondary education.

To conclude, the findings revealed that their pre-university learning experience had some influence on the students with HI. This learning experience included their academic

achievements and art skills, which had to be sufficient for them to pass the university entrance exam.

Post-Secondary Educational Experiences

The students had already done relatively well at the secondary school level; however, their good marks were not maintained at the same level at university. Although all the participants with HI came from different educational backgrounds, their university experiences were new and challenging, especially for those participants who came from schools for students who are deaf. The learning environment was quite different, as they were surrounded by hearing peers, the lectures were delivered orally, the academic work was demanding, and they also needed to adjust to learning on their own. Some subjects were new for them and they felt that the workload was much heavier than at high school. Despite the support services, special classes, learning partners, and the Centre for Counselling Services to help them to fit into the new learning environment, the first year was a significant period of adjustment for them. All the participants had difficulties with some subjects and they felt they had to cope by themselves. After the first year, they learned to how to study on their own and some of them improved and felt they had adjusted better to university life.

According to Ho (1993), students with HI who use oral communication and graduate from a regular senior high school adjust better to post-secondary studies and achieve higher academic scores, because they are accustomed to using speech in their learning environment, and the teachers treat them like hearing students. This study did not support these findings, as the two students (Helen and Wendy) who had attended regular and vocational high schools and learned sign language at university and always used speech as their communication method adjusted more smoothly to campus life, but they did not

obtain higher academic scores because they did not have strong art skills. As a result their grades were no better than the other students in this study who had attended schools for students who are deaf, or a combination of regular schools and schools for students who are deaf, which tend to emphasize art skills. Good oral ability enabled students to adjust more quickly to campus life, allowing them to communicate with others, but at this university art skills were also important in achieving high marks.

Research Question 2 - What were the facilitators to the completion of their program?

The facilitators are described below:

Facilitators - Personal Effort

The participants indicated that some of them put a lot of time and effort into their studying, especially before an exam. They had difficulties with academic work and were at times very tired due to the high level of stress. However, most of them overcame the challenges on their own. Some of them failed courses, but they still persisted with their studies and retook courses. John, however, appeared to spend more time studying than the others to earn good grades. John's case is consistent with Chang's (1999) report, in which eleven outstanding people with hearing impairment studied by themselves day and night to learn the material.

Facilitators - Personal Qualities

The qualities that seemed to lead to success were: self-confidence, taking the initiative in learning and interacting directly or indirectly with their professors, doing the course readings, seeking help, a capacity for hard work, and strong goal- and honour-orientation. The most important quality seemed to be strong goal commitment (to obtain a degree and get a well-paying, stable job with good benefits), which all the participants in this study possessed. They also needed to take the initiative in their

learning such as doing extra reading, asking the professor questions for clarification, and asking for help and working with their learning partner. John was the only participant who consistently showed all of these qualities. He was optimistic, self-confident and he studied hard. As a result, his academic achievement was on a par with that of his hearing classmates. John's high level of self-motivation was also an important factor in his success, and this finding is consistent with studies conducted by Chang (1999), Kao (1995), Luckner and Stewart (2003), and Rogers, Muir and Evenson (2003), in which successful individuals with HI were motivated, showed determination, and were proactive, engaged, and persistent. In Annie's case, she only worked hard at first, but she had a strong sense of honour, and did not want to be shamed by failure, and as a result she knew she needed to study hard to complete her degree. Maggie considered giving up in her second year, but managed to regain a sense of high self-esteem (she reminded herself that she had won an award) and continued with her studies.

Facilitators - Learning Partners

Most of the participants thought that the learning partner support system helped them to complete their degree, and was of great assistance, especially in the first and second years of university. The learning partner took notes in class, mediated between the professor and student with HI, and offered academic help if necessary, reminded them of work due, and answered or clarified academic questions. The students with HI appreciated having learning partners who showed concern for their learning. The learning partners mostly offered academic help, but some of them also offered emotional support for their partner with hearing impairment. Two participants (Jenny and Maggie) even confided in their learning partners about their personal problems. In the support system, the provision of a learning partner was very successful in helping students with hearing

impairment. This finding supports the work of Rogers, Muir and Evenson (2003), which outlines the benefits of learning partnerships with peers at mainstream universities.

In summary, the students with HI put varying degrees of personal effort into their studies, and their positive personal qualities, including strong goal commitment, enabled them to continue with their studies. Their learning partners also played an important role in helping them to persist in their studies.

Research Question 3: What were the barriers to the completion of their program?

Barriers - Communication

The major barrier was that of communication, either oral or written. The participants reported that most students at the university were hearing students, and consequently they needed to use oral or writing methods to communicate with them. Most of the hearing students did not have the patience to respond to written language, and oral communication was therefore very important. It was, however, also a barrier for students with HI if their oral communication was weak. Annie, Helen, and Wendy had well-developed oral communication, and were able to speak with other hearing students, support staff, and even professors, but all three felt self-conscious about their voices (they thought that they sounded strange to hearing people) and would be discouraged if others did not immediately understand what they said. This reaction affected the quality and frequency of interactions with hearing people. The other participants (Jenny, John, Maggie, and Lily) came from schools for students who are deaf and they were accustomed to using sign language. As a result, their oral communication was not clear to hearing students and they mostly used writing to communicate with others. These findings resembled a 1986 study (Walter & DeCaro), in which students with HI claimed their communication problems prevented them from making friends easily with hearing

students, and this limited their social integration and a 1992 study (Coryell, Holcomb & Scherer) in which it was observed that communication can be a major source of friction between hearing students and those with HI.

Barriers - Social

This study found communication barriers led to social barriers between the students with HI and the wider student community of hearing students. They felt that communication with other students with HI was easier for them and they were more comfortable in isolated groups, because they could avoid negative social prejudice from their hearing peers.

Most students with HI (apart from John) tended to prefer to socialize with other students with HI and rarely attended university clubs. This finding is consistent with recent studies (Foster & Brown, 1989; Hsiao, Hsu & Wu, 2001; Stinson & Walter, 1992), in which many students with HI were found to make friends only with peers with HI, and they seldom made friends with hearing peers, and never attended extracurricular activities. They tended to isolate themselves into groups of students with HI, due to their disabled condition.

This is also consistent with Tinto's (1993) identification of subcultures in colleges, each subculture with its own distinct view of the world. An individual may be isolated from the mainstream student body, but will persist in his or her studies if competent membership is established in at least one locally supportive social community. Stinson, Scherer and Walter (1987) also reported that students with HI who demonstrated a high level of interaction with their subculture (i.e., peers with HI) showed a high level of persistence. In this study, the students with HI stated that they thought it was important to have a community of students with HI in the university. This supports the work of Innes

(1985), whose findings in a study of students with HI and their educators showed that both students and educators agreed that the ratio of the students with HI to hearing students was the most important factor in attracting students to post-secondary institutions.

The above findings are also consistent with research conducted by Foster and Brown (1989; Brown & Foster, 1991), who found that students with HI were not socially integrated with their hearing peers, and experienced separation and even social isolation within the mainstream class. The students in this study preferred to make friends among their peers with HI, whom they felt they understood and to whom they could relate. This finding is also consistent with a study by Stinson and Walter (1997) who reported that students with HI in mainstream classes preferred to relate to other students with HI.

Barriers - Academic

All participants reported that they had challenges in their learning, especially in the first year at university. Although they had done well in high school, their secondary studies did not prepare them for the academic demands of university. Students with HI have particular adjustment needs. They have to adjust to writing essays, learning on their own and working out how to get help from their learning partner, and some have to adjust to classroom instruction that is predominantly through speech and not sign language. Foster and Elliot (1986) and Foster, Lang and Snell (1999), who interviewed 20 students with HI who transferred to NTID (National Technical Institute for the Deaf), reported that teachers went through the course material too quickly, and treated the students with HI as though they could hear. The lectures were also too abstract or theoretical. In this study, the participants with HI also found that most of the introductory course professors did not pay any attention to students with HI, and they spoke too quickly and seldom wrote down

the important points on the blackboard. The students with HI, therefore, felt alienated and seldom interacted with their professors, and relied instead on their learning partners to ask their professors questions.

Furthermore, according to Walter and Decaro (1986), who conducted a survey of students with HI, students experiencing difficulties in the traditional academic skills - especially in math, science, and reading - are severely limited in their university learning. The participants in this study similarly stated that they were weak in basic courses such as English, and in some required courses. Their academic background was therefore not as strong as that of their hearing peers, and they needed to spend a lot of time catching up. They required strong motivation and effort to overcome these barriers. This finding is supported by Lin and Chyi's (1990) study, in which they found that that 40 percent of students with HI had to retake a failed course. According to Lin and Chen (2003) and Stinson and Walter (1992), students with disabilities experience stress in their academic learning, which include essay-writing, failed courses, exams, oral reports and anxiety and distress in the classroom. The participants in this study had additional stress in their need to maintain their academic scholarships.

Another barrier was their reluctance to ask for academic help from the Centre for Counselling Services and their determination to resolve their problems on their own. This finding is consistent with studies conducted by Chang (1999), Hsiao, Hsu and Wu (2001) and Kao (1995), in which all the participants had problems with learning, and most of them would resolve them by themselves or ask their classmates. In this research, the students with HI reported that they seldom asked for help from the Centre for Counselling Services. This is an important barrier that needs to be emphasized, because the Centre for Counselling Services did not know about the students' problems unless

they reported them, and sometimes the problem became worse because the Centre for Counselling Services did not know about the problem in time and could not offer help when it was most needed.

In brief, the participants stated that individual effort, personal qualities, and help provided by a learning partner were the main elements leading to persistence, but they felt that communication, social and academic problems were barriers that they had to overcome at university.

Research Question 4 - Why did these students persist in their studies?

Goal Commitment

Most of the participants had strong motivation to graduate, because they thought that getting a degree would later lead to a good job. Without a university degree, they could only work in labouring jobs such as factory work in Taiwan. Post-secondary graduates with HI can obtain jobs which would not be possible with only a high school diploma (Stinson, Scherer, & Walter, 1987). They are unemployed much less often, have higher level jobs, and earn significantly more money (Welsh & Macleod-Gallinger, 1992). For example, the salaries of NTID (National Technical Institute for the Deaf) graduates are 93% of what a comparable hearing cohort earns, while high school graduates with HI earn just 70% of comparable hearing high school graduates (Welsh, Walter, & Riley, 1989). All participants therefore were strongly motivated to their goal: completion of their degree. None of them wanted to waste this educational opportunity by quitting university. However, two of them, Jenny and Maggie, did consider dropping out of university, but they both persisted in their studies because of their strong motivation.

The importance of intention was identified by Tinto (1993), who stated that the more committed a student is, the more likely he or she is to complete the program, despite poor

grade performance, and “strong commitment may lead the person to persist until degree completion despite unrewarding interactions within the college” (p.111). Stinson and Walter (1997) also found that goal commitment is an important factor leading to persistence. These findings are somewhat contradictory to other studies (Dagel & Dowaliby, 1989; Dowaliby, Garrison, & Dagel, 1993; Stinson, Scherer and Walter, 1987; Walter and DeCaro, 1986), which identified social integration rather than goal commitment as the vital factor leading to persistence among students with HI.

Contributions to Theory

This research, like other studies on the persistence of students with HI, used a revised version of Tinto’s Student Integration Model (SIM) as its conceptual model. This study has contributed to research on the persistence of students with HI in the following ways:

Firstly, while other researchers have tended to conduct only quantitative research, this study applied qualitative research methods, following Tinto’s most recent suggestion that “multi-data sources, quantitative and qualitative, case studies” should be used (p. 176, 1998). The qualitative research method, according to Merriam (2002), provides an “in-depth understanding of the situation and meaning for those involved” (p.19). The participants with HI in this study have described their post-secondary education experiences.

Secondly, most other researchers used Tinto’s Student Integration Model to predict students’ withdrawal or persistence in their first year of university, following Tinto’s observation that the first year is the crucial year in terms of withdrawal or persistence (1993). This study, however, was not concerned with prediction of withdrawal or persistence, but focused instead on third and fourth year university students with hearing

impairment to explore their successful learning experiences that related to their persistence. Therefore, this research demonstrated that Tinto's model may be used not only to predict persistence, but to explain why it occurred, although it did not fit that well.

Thirdly, most researchers only interviewed students with HI, whereas this study included interviews with the learning partners, professors, and counselling service personnel. This gave a broader perspective on the issues and has provided more information with which to explore the learning experiences of the students with HI, and how they have overcome the difficulties they faced.

Fourthly, this study has contributed to theory with the addition of the factor of the support services. This study demonstrates that the provision of special classes, the Centre for Counselling Services, and the learning partners positively influenced the persistence of students with HI. The findings reveal that the learning partners have a significant impact on the learning experience of the students with HI.

Finally, the findings of this study demonstrated that Tinto's model is somewhat applicable to students with HI, not just hearing students.

To conclude, this study's findings only partially support Tinto's model, which is supported by many studies on hearing students. Tinto identified the most important factors leading to persistence as academic and social integration. While students with HI were generally not socially integrated into the social life of the university, they did have a small group of friends, therefore social integration was not found to contribute strongly to persistence in this study, as defined by Tinto. Individual characteristics, academic integration, support services, and goal commitment were identified as the most important factors in persistence. Tinto's model is, however, still useful for identifying factors in persistence for both hearing students and students with hearing impairment.

Recommendations for Practice

The following are recommendations for practice in universities where students with HI are enrolled.

Pre-University Schools

- (1) The gap between high school and university expectations for students with hearing impairment could be bridged by inviting university students with HI to hold seminars in high schools on the skills and study habits required to be successful at university.
- (2) High schools also need to emphasize communication methods, especially oral and writing communication skills (essay writing, in particular).

Learning Partners

- (1) Short training sessions for note-takers should be offered, and orientation videos provided to develop a better understanding of the note-taking process.
- (2) The role of the learning partner, the help they provide and the pay they receive, and how to provide students with HI with the help they need after the first year, needs to be revisited.

Professors

- (1) The professors, especially new professors, need to be better informed about the learning background and characteristics of students with hearing impairment.
- (2) The professors should accommodate students with HI in their teaching, using acetates, writing more on the blackboard, or handing out lecture outlines.

The Centre for Counselling Services

- (1) The Centre for Counselling Services should take the initiative in contacting students with HI formally or informally, and not wait for the students to ask for help.

(2) The Centre for Counselling Services should therefore consider offering many activities for students with hearing impairment according to the specific needs identified in each year of university life.

(3) The Centre for Counselling Services should offer workshops on guidance on study and teaching strategies for students with HI and professors.

Hearing Students

(1) First year orientation should include some information about students with disabilities and how to interact with them.

(2) The university should encourage them to attend a sign language club, possibly for credit.

University

(1) The university should offer formal or informal seminars in the semester for professors to discuss and share their teaching experience with students with hearing impairment.

(2) The university should encourage a mentoring program in which hearing students could volunteer to help students with hearing impairment, especially in the first year of university.

(3) The university should invite high school art teachers to a seminar with university professors to discuss how to establish the students' basic art skills.

Limitations of the Study

The findings for this study came from one culture (Asian) and one institution, which offers the largest program for students with hearing impairment in Taiwan. As in any qualitative study, the findings may not be generalized yet they might be transferable to similar environments in other institutions. As well, this study was limited to one group of students in their third and fourth year of university. Their recollections of their first and

second year learning experiences are inevitably coloured by later years. This study furthermore did not include their hearing classmates, and consequently did not provide data on what the hearing students think about the challenges faced by their classmates with hearing impairment.

Further Research

The participants of this study major in the department of art, and as a result, further research should include students with hearing impairment in other departments and other institutions. Studies could also follow more than one group of students as they progress through their studies year by year to gain an accurate picture of their experiences. Further research could also consider those students who have dropped out of this art university. This would allow us to have a broader understanding of post-secondary learning for students with hearing impairment. Interviews with former students who withdrew and their learning partners would give us a more complete picture and improved understanding of their problems and difficulties at university.

This study did not focus on individual factors as main research questions. Further studies could focus on different groups of students with HI according to their educational background, to examine the differences between students from regular high schools and those from schools for the students who are deaf, in order to assess how their different experiences influence their integration at university. Further research could also examine in more detail the relationship between grade point average and persistence.

This study considered the role of the support services in addition to other factors such as individual characteristics and commitment. Further research could examine the support services and how they relate to the learning experiences and persistence of students with HI. Within the confines of this study, the findings revealed that learning

partners were more helpful than other support services, such as special classes and counseling services. Topics for further research could include the investigation of the social integration of students with hearing impairment and their hearing peers.

This study showed that social integration among hearing peers (making friends, attending extracurricular activities) did not strongly influence persistence. All the participants except for John seemed to be isolated from the hearing student body. However, they seemed to feel connected to their small group of friends with HI, who provided them with academic support and opportunities to socialize. Further research could focus on the topic of the peer relationships of students with hearing impairment in post-secondary education.

Conclusion

All the participants in this study came from different educational backgrounds and used different communication methods, but their personal characteristics, characteristic of effort in their academic work, the provision of learning partners, and their strong motivation to graduate helped them to persist in their studies. Students with hearing impairment who successfully persist and graduate provide an example for our teachers, other students with hearing impairment, parents and even the Ministry of Education. Their educational experiences, as examined in this study, indicate that it is a combination of factors that leads to persistence at university for students with HI. Their experience also tells us what factors at university can be improved and emphasized in order to make post-secondary education more accessible for other students with HI.

In this study, a picture emerged of the academic life of the participants with HI and what problems they experienced. In their learning experiences, all of them shared one particular characteristic: the desire to graduate from university. Their strong

pre-university learning experiences and high academic achievements were important for them to gain entrance into university. The university support services and family support also aided them in finishing their studies. Despite their skills and support networks, they all had adjustments to make to the academic demands of university. Both students with HI and hearing students need to be supported, and need to learn that every individual has their own strength. Support from educators and parents makes a significant difference and enables the achievements of students with HI to be equal to those of hearing peers despite their hearing impairment.

It is hoped that this study and its findings will shed some light on the issue of higher education and even primary, junior and secondary education for students with HI. The more we know about the learning experiences on all educational levels of students with HI, the better we can facilitate access to higher education for a wider range of students with HI. This study, which examined the successful learning experiences of students with HI in their kindergarten, primary, junior, secondary, and post-secondary education, revealed that every educational stage relates to the other and every stage in their learning is important for them. They had positive pre-university educational experiences, which gave them the opportunity to enter higher education. They want very much to graduate, because it is important for them to get a well-paying, stable job with good benefits. Access to higher education may be the most important educational goal for students with HI.

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Appendix A

Definition of Terms

Hearing Impairment: this is a generic term indicating a hearing disability that may range in severity from mild to profound. It includes the subsets of deaf and hard of hearing.

A deaf person is one whose hearing disability precludes successful processing of linguistic information through audition, with or without a hearing aid.

A hard-of-hearing person is one who, generally with the use of a hearing aid, has residual hearing sufficient to enable successful processing of linguistic information through audition (Brill, MacNeil & Newman, 1986, p.67).

Mainstreaming: the placement of students with disabilities in general education classes for all or part of the day and for all or only a few classes; special education teachers maintain the primary responsibility for students with disabilities (Hallahan & Kauffman, 2000, p.61).

Integration: the extent to which the individual shares the normative attitudes and values of peers and faculty in the institution and abides by the formal and informal structural requirements for membership in that community of which the individual is a part (Pascarella & Terenzini, 1991, p.52)

Intentions: the desired outcomes to be achieved by becoming a student in college or university.

Goal Commitment: a person's commitment to personal educational and occupational goals. It specifies the person's willingness to work toward the attainment of those goals (Tinto, 1993, p.43).

Institutional Commitment: a person's commitment to the institution in which he/she is enrolled. It indicates the degree to which one is willing to work toward the attainment of

one's goals within a given higher educational institution (Tinto, 1993, p.43).

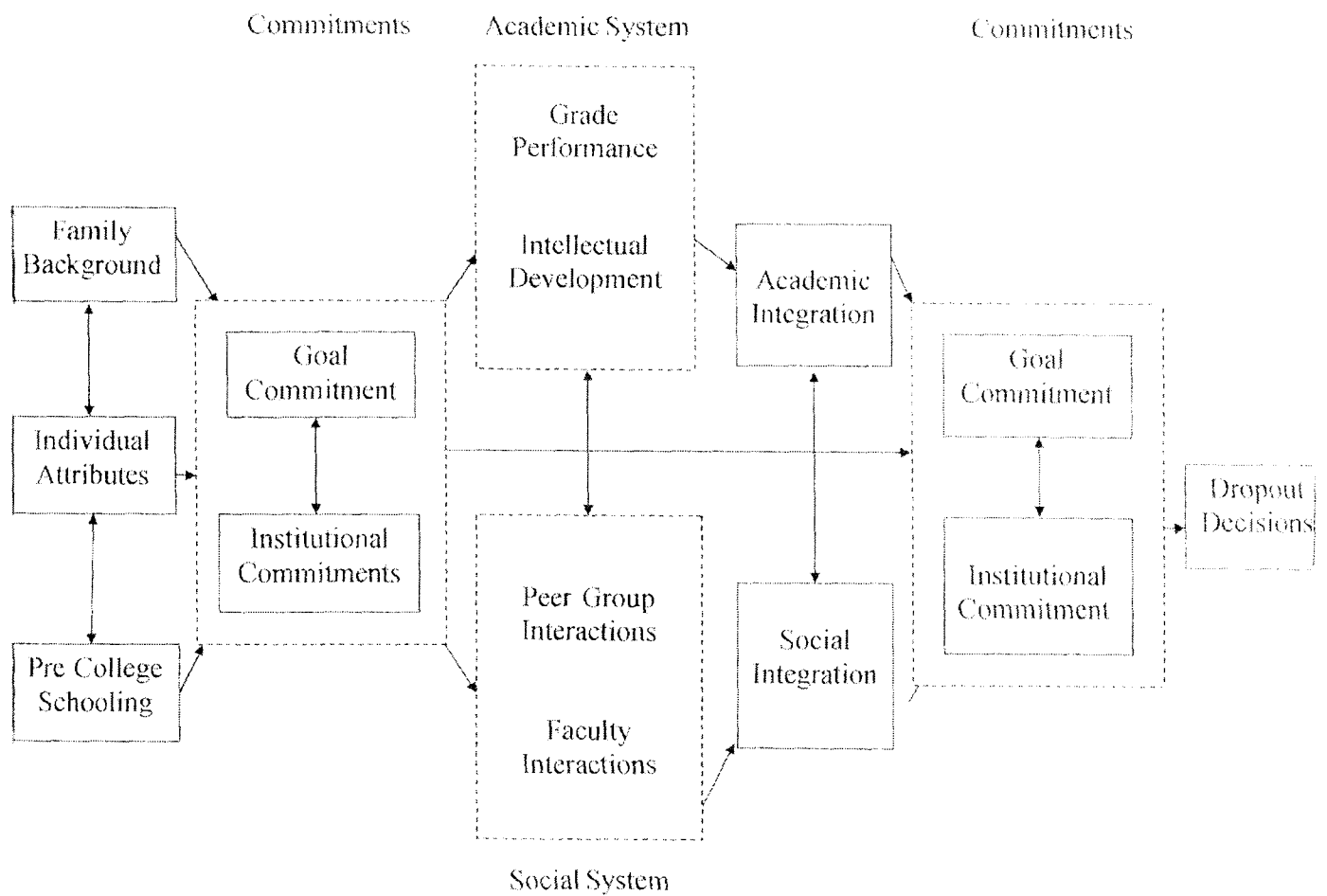
External commitment: refers to the students' satisfaction with their lives off-campus. This may include their commitment to friends, family members, community activities, work, and so on (Tinto, 1993, p.62).

Appendix B

Tinto's Student Integration Model (SIM)

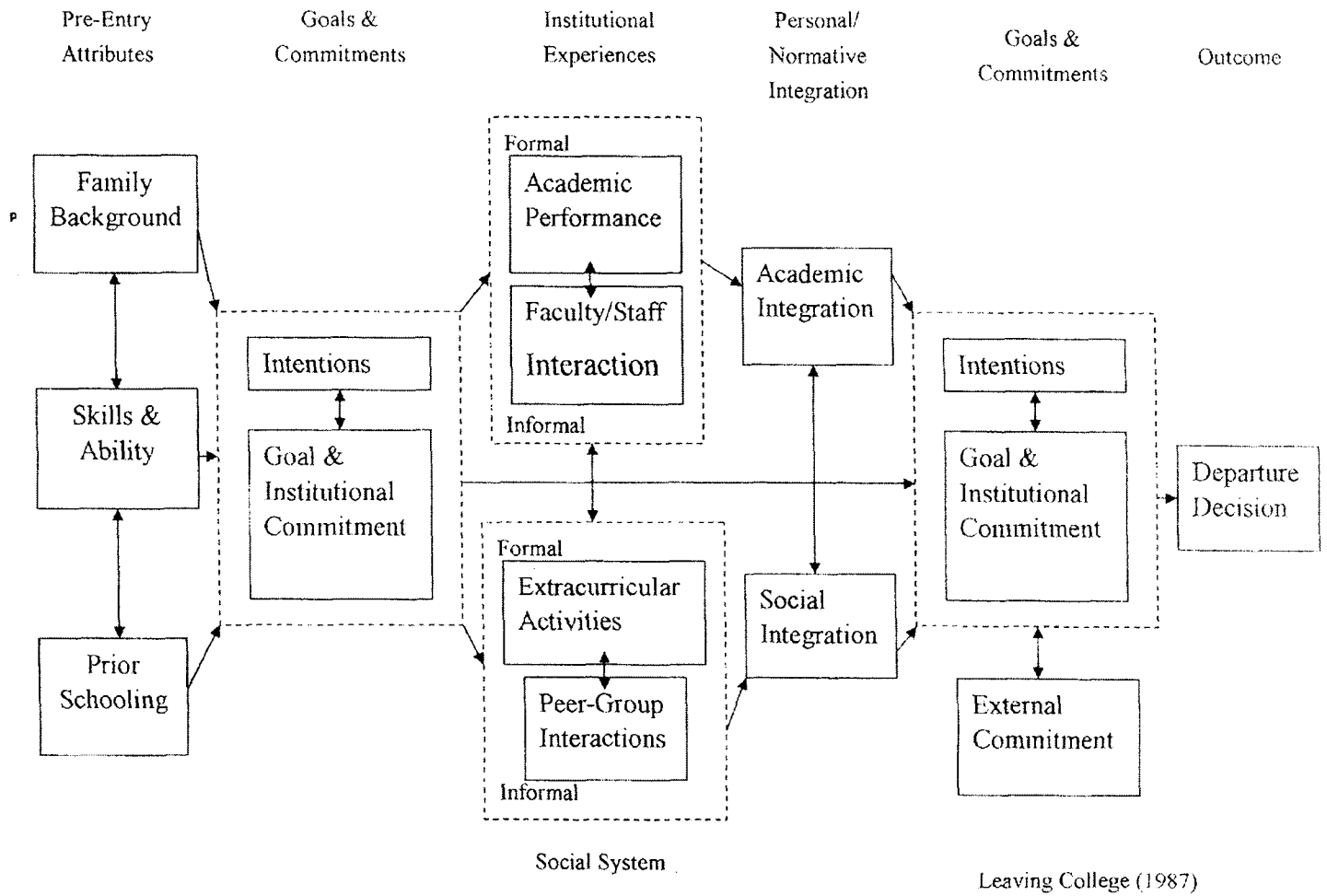
B-1 A Model of Dropout (1975)

A Model of Dropout (1975)

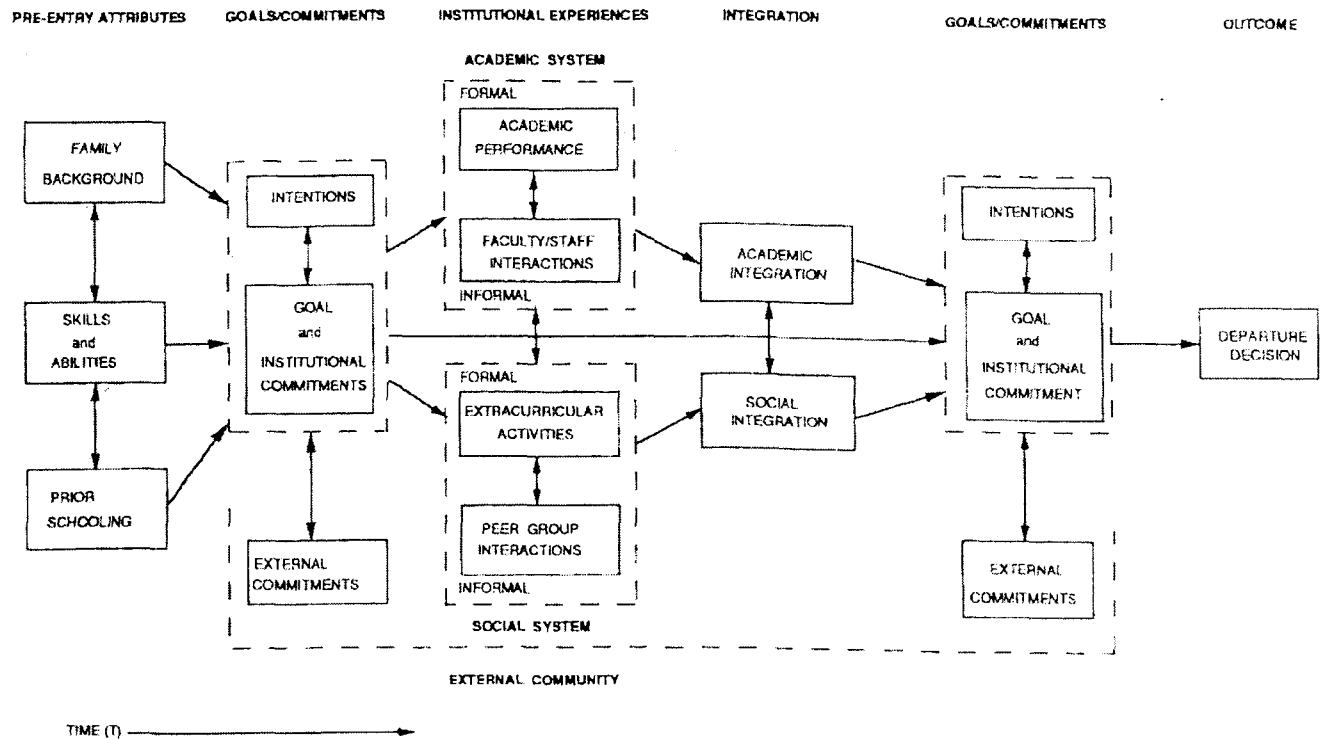


B-2 A Model of Institutional Departure (1987)

A Model of Institutional Departure

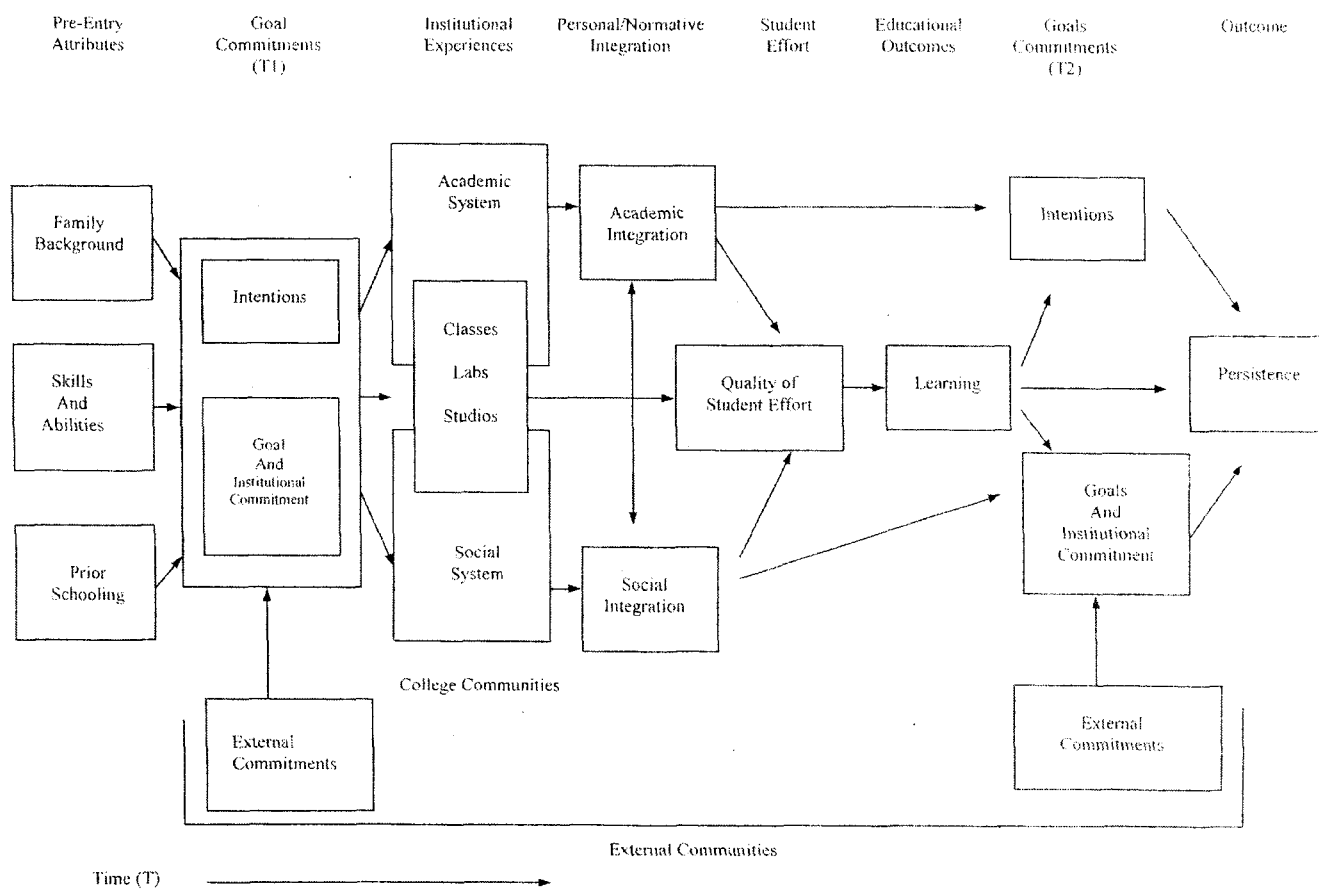


B-3 A Longitudinal Model of Institutional Departure (1993)



B-4 A Model Linking Classrooms, Learning, and Persistence (1997)

Model Linking Classrooms, Learning, and Persistence



Appendix C

Summary of research on persistence: Table C-1

Research on four-year institutions

Researchers	Factors found to predict withdrawal/ persistence
Pascarella & Chapman (1983) Stoecker; Pascarella & Wolfe (1988) Braxton; Vesper & Hossler (1995) Millem & Berger (1997) Hicks & Lerer (2003)	Academic and social integration
Pascarella & Terenzini (1980)	Goal and institutional commitment
Getzlaf; Sedlacek; Kearney & Blackwell (1984)	Academic integration, goal and institutional commitment
Grosset(1991)	Cognitive, personal development and goal commitment
Cleveland-Innes (1994)	Goal commitment for non-traditional students. Academic integration for traditional students
Allen & Nora (1995)	Goal commitment
Eccles (2001)	Goal, institutional and external commitment
Strauss & Volkwein (2004)	Classroom experience, social activities and friendships were strong predictors of institutional commitment
Neumann & Finaly-Neumann (1989)	Academic integration
Sagy (2000)	Academic integration
Ishitani & DesJardins (2002)	Financial aid, educational status of mother and SAT score

Table C-2

Research on two-year community college

Researchers	Factors found to predict withdrawal/ persistence
Pascarella & Chapman (1983)	Academic integration
Nora (1987)	Commitment
Nora; Attinasi & Matonak (1990)	Academic integration
Bers & Smith (1991)	Social integration
Mutter (1992)	Academic integration, goal and institutional commitment
Napoli & Wortman (1998)	Academic and, less importantly, social integration
Borglum & Kubala (2000)	Academic and social integration

Table C-3

Research on students with disabilities

Researchers	Factors found to predict withdrawal/ persistence
Wiseman; Emry & Morgan (1988)	Motivation and social adjustment
Smith & Nelson (1993)	Personal characteristics and social support
Duquette (2000)	Background characteristics and academic integration
Lin & Chen (2003)	Academic integration, career aspirations, social relationships and family
Chang (2000)	Satisfaction with school and family support and dissatisfaction with academic integration
Hsiao, Hsu and Wu (2001)	Problems in academic integration and peer relationships

Table C-4

Research on students with hearing impairment

Researchers	Factors found to predict withdrawal/ persistence
Walter & Decaro (1986)	Academic and social factors
Foster & Brown (1989)	Social integration.
Dagel & Dowaliby (1989)	Academic and social factors
Brown & Foster (1991)	Social integration
Stinson & Walter (1992, 1997)	Background, commitment, academic and social factors
Dowaliby; Garrison & Dagel (1993)	Academic and social integration
English (1993)	Support services and academic integration
Foster & Elliot (1986)	Support services and academic and social integration
Stinson, Scheer & Walter (1987)	Social integration
Coryell, Holcomb & Scherer (1992)	Social integration
Ho (1993)	Background characteristic of communication ability
Lin & Chyi (1990)	Background characteristic of pre-university education experience
Chang (1999)	Personal characteristics, family and teacher support and encouragement
Kao (1995)	Academic integration, personal characteristic, and family and teacher support and encouragement

Appendix D

Recruitment Text

I am a graduate student at the University of Ottawa currently working on a Ph.D thesis. The purpose of my research is to explore the post-secondary school experiences of students with hearing impairment, in particular their reasons for persistence in their studies. I am recruiting 3rd or 4th year students with hearing impairment, hearing partners, and professors, and personnel from the Centre for Counselling Services who have 2 years experience working with students with hearing impairment.

The students with hearing impairment will be invited individually to participate in three 90-minute semi-structured interviews with the researcher at a time and place that is convenient. There will be one further interview, which will be a group interview involving all participants with hearing impairment. The questions for the group interview will focus on their learning and school experiences and the facilitators and barriers to the completion of their study. Hearing partners and professors and personnel from the Centre for Counselling Services will be asked to participate in one 60-minute interview. The interview will be held at a time and place convenient for you. All interviews will be audio-taped, and typed transcripts will be sent to each participant to be edited and approved.

I will also conduct field observation, which means that I will accompany students with hearing impairment as they go about their campus life individually and in groups for 1-2 hours a week for 4 weeks. Visual observation alone will be conducted; there will be no video or audiotapes involved.

A compensation of \$ 20, which includes transportation costs, will be allocated for the students with hearing impairment at the beginning of each session (a total of \$60).

Transportation fee up to \$ 10 will be reimbursed for the hearing partners.

If you would like to participate in this research, please contact me at [redacted] or contact the Centre for Counselling Services. I will mail you a copy of the consent form and will arrange an appointment. If you have any questions about this research, please contact me at [redacted]. Your time and cooperation is greatly appreciated.

Shu-Fen Lee
Faculty of Education
University of Ottawa

Dr. Cheryll Duquette
Advisor
University of Ottawa

Recruitment Text in Chinese

徵求研究對象

我是加拿大渥太華大學教育學系研究生正在進行博士論文. 我的研究目的是探討聽障大學生如何克服障礙堅持完成大學學業. 我正在徵求 3 或 4 年級的聽障生, 學伴, 教師, 行政人員有 2 年和聽障生工作經驗.

聽障生參與每次 90 分鐘 3 次和李女士個人訪談, 在校內或校外以受訪者方便的時間為主, 訪談並錄音和轉述成文字. 此外個人訪談結束後將有一個約 60-90 分鐘的聽障生團體座談, 團體座談的內容是和其他聽障生討論分享就讀學的經驗, 如何克服障礙完成學業. 學伴, 教師和行政人員將和李女士 60 分鐘的個別訪談, 在校內或校外以受訪者方便的時間為主, 所有的訪談將會錄音和轉述成文字並給各受訪者核對訪談內容.

我也會進行一週 1 或 2 小時持續 4 週的觀察活動, 觀察聽障生在校的社交活動和校園生活, 觀察不需要錄音和錄影.

聽障生每次的訪談將給予包含交通費的報酬加幣\$20(台幣\$500), 3 次共加幣\$60(台幣\$1500), 學伴將補助交通費最高加幣\$10(台幣\$250).

如果你願意參與這研究, 請和我連絡 leefen321@hotmail.com 或是學務處, 我將郵寄一份同意書並安排訪談時間, 假如你有任何有關研究的問題請聯絡我 leefen321@hotmail.com 感謝你的參與

李(張)淑芬

渥太華大學教育學系

Dr. Cheryl Duquette

指導教授

渥太華大學教育學系

Appendix E

Consent Form for Students with Hearing Impairment

Title of the study: Taiwanese University Students with Hearing Impairment: An Investigation of their Experiences and of their Reasons for Persistence in their Studies.

Principal Investigator(s) (Supervisor(s)): Dr. Cheryll Duquette
Associate Professor
Faculty of Education
University of Ottawa

Co-investigator(s) (Student(s)): Shu-Fen Lee
Faculty of Education
University of Ottawa

INVITATION TO PARTICIPATE:

This research project is a doctoral thesis conducted by Shu-Fen Lee of the Faculty of Education, University of Ottawa, Canada..

I am invited to participate in the abovementioned research study conducted by Ms Lee, doctoral student, who is being supervised by Cheryll Duquette, PhD, both of the Faculty of Education, University of Ottawa, Canada.

PURPOSE OF THE STUDY:

I understand that the purpose of this study is to explore the experiences of university students with hearing impairment, to see how they have overcome obstacles and persisted

in their studies. From this research the researcher wishes to learn what factors influence success at higher education. This study may then be used as a reference guide for policy makers, teachers and parents who work with school age students with hearing impairment.

ELIGIBILITY:

To be able to participate in this study, I must be registered at the University of Taiwan and have a hearing impairment.

PARTICIPATION:

I understand that I will be asked to participate in three 90-minute interviews spaced 3 to 7 days apart, at convenient times for me on or off the campus. The interviews will be conducted by Ms. Lee and will be audiotaped and transcribed. The purpose of these interviews is to discuss my school experiences through elementary to post-secondary education. After each interview, I will be given a copy of the transcript so that I may review it for accuracy. After the third interview, I will also be given a copy of my individual profile to review.

After the individual interviews are finished, I will also be asked to participate in a discussion group that will last approximately to 60-90 minutes, in which I will share my perspectives on post-secondary learning experiences with the other participants. This discussion group will be audiotaped and transcribed.

Ms. Lee will also accompany me on my campus life individually or in a group for 1 or 2 hours a week for 4 weeks, to observe how I interact with fellow students and friends in my social activities. This will not be autiotaped or videotaped. This will help the researcher to understand how much social factors influence my university life.

RISKS:

The researchers have assured me that I am free to refuse to answer any questions that I do not wish to answer.

I may request to have a short break in the interview process at any time.

BENEFITS:

I will not benefit directly from my participation in this research. However, this research will benefit potential students in higher education, as this project hopes to increase awareness of the factors leading to successful experiences of students with hearing impairment in universities.

CONFIDENTIALITY AND CONSERVATION OF THE DATA:

I have received assurance from the researcher that the information gathered from me will be used solely for the purposes of this research. The researcher will ask other members of the focus groups to keep what I say confidential but the researcher cannot guarantee they will do so. In Taiwan, the tape-recordings and transcripts will be kept in a security box in a local bank, and in Ottawa they will be kept in a locked filing cabinet in the office of Dr. Cheryll Duquette at the University of Ottawa for a period of 5 years post-publication, after which they will be destroyed. The only people who will have access to the data are Dr. Duquette and Ms. Lee. Electronic data will be password protected and stored only on Ms. Lee's computer for 5 years post-publication.

ANONYMITY:

I will remain anonymous in the study, and Ms. Lee will give me an English name (a pseudonym) for reference purposes.

In the focus group, however, my anonymity cannot be guaranteed within the members of the group.

In publications resulting from the study,

I agree to be quoted. yes _____ no _____.

I agree that my words be used in reports and publications, but I wish to remain anonymous. yes _____ no _____.

COMPENSATION:

I will receive compensation of \$ 20, which includes transportation costs at the beginning of each session by Ms. Lee, for a total of 3 individual sessions (\$ 60 in total), and a buffet lunch after the focus group. Missed sessions will not be compensated. If I decide to withdraw from the study will not affect any reimbursement costs that may have been incurred prior to withdrawal.

VOLUNTARY PARTICIPATION:

I am under no obligation to participate and if I choose to participate, I may withdraw from the study at any time, for any reason, without consequence. If I choose to withdraw, all data gathered until the time of withdrawal will be destroyed.

NEW FINDINGS:

In the event that the researcher discovers new findings that might influence my decision to continue in the study, she will notify me of them immediately.

INFORMATION ABOUT THE STUDY RESULTS:

The researcher will email me the research findings of the study.

MORE INFORMATION ABOUT THIS STUDY:

If I have any other questions or require more information about the study itself, I may

contact the researcher or her supervisor at the numbers mentioned hereinabove.

If I have any questions with regards to the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, or

CONSENT: I, _____, the undersigned, agree to participate in the above research study. The study has been explained to me, I have had the opportunity to ask questions about my involvement and to receive additional details that I wanted to know about the study. I understand that by accepting to participate, I am in no way waiving my right to withdraw from the study at any time.

I have been given a copy of this form.

Participant's name: (Please print) _____

Participant's signature: _____

Date : _____

I, _____, am interested in collaborating in the project conducted by Shu-Fen Lee of the Faculty of Education at the University of Ottawa. The purpose of the research is to examine the school experiences of university students with hearing impairment.

Written consent of the participants must be obtained whenever a research project is undertaken with human participants. The University of Ottawa has made this type of agreement mandatory out of respect towards the participants, and this does not imply that they may be put at risk.

Consent Form for Hearing Partners

Title of the study: Taiwanese University Students with Hearing Impairment: An Investigation of their Experiences and of their Reasons for Persistence in their Studies.

Principal Investigator(s) (Supervisor(s)): Dr. Cheryll Duquette
Associate Professor
Faculty of Education
University of Ottawa

Co-investigator(s) (Student(s)): Shu-Fen Lee
Faculty of Education
University of Ottawa

INVITATION TO PARTICIPATE:

This research project is a doctoral thesis conducted by Shu-Fen Lee of the Faculty of Education, University of Ottawa, Canada..

I am invited to participate in the abovementioned research study conducted by Ms Lee, doctoral student, who is being supervised by Cheryll Duquette, PhD, both of the Faculty of Education, University of Ottawa, Canada.

PURPOSE OF THE STUDY:

I understand that the purpose of this study is to explore the experiences of university students with hearing impairment, to see how they have overcome obstacles and persisted in their studies. From this research the researcher wishes to learn what factors influence success at higher education. This study may then be used as a reference guide for policy makers, teachers and parents who work with school age students with hearing

impairment.

ELIGIBILITY:

To be able to participate in this study, I must be registered with the Special Service Center as a hearing partner.

PARTICIPATION:

I understand that I will be asked to participate in one 60 minute interview, at convenient times for me on or off the campus, conducted by Ms. Lee. The interview will be audiotaped and transcribed. The purpose of this interview is to discuss my experience in helping students with hearing impairment at university. After the interview, I will be given a copy of the transcript so that I may review it for accuracy.

RISKS:

The researchers have assured me that I am free to refuse to answer any questions that I do not wish to answer.

I may request to have a short break in the interview process at any time.

BENEFITS:

I will not benefit directly from my participation in this research. However, this research will benefit potential students in higher education, as this project hopes to increase awareness of the factors leading to successful experiences of students with hearing impairment in universities.

CONFIDENTIALITY AND CONSERVATION OF THE DATA:

I have received assurance from the researcher that the information gathered from me will be used solely for the purposes of this research. In Taiwan, the tape-recording and

transcripts will be kept in a security box in a local bank, and in Ottawa they will be kept in a locked filing cabinet in the office of Dr. Cheryll Duquette at the University of Ottawa for a period of 5 years post-publication, after which they will be destroyed. The only people who will have access to the data are Dr. Duquette and Ms. Lee. Electronic data will be password protected and stored only on Ms. Lee's computer for 5 years post-publication.

ANONYMITY:

I will remain anonymous in the study, and Ms. Lee will give me an English name (a pseudonym) for reference purposes.

In publications resulting from the study,

I agree to be quoted. yes _____ no _____.

I agree that my words be used in reports and publications, but I wish to remain anonymous. yes _____ no _____.

COMPENSATION:

Transportation costs up to \$ 10 will be reimbursed by Ms. Lee.

VOLUNTARY PARTICIPATION:

I am under no obligation to participate and if I choose to participate, I may withdraw from the study at any time, for any reason, without consequence. If I choose to withdraw, all data gathered until the time of withdrawal will be destroyed.

NEW FINDINGS:

In the event that the researcher discovers new findings that might influence my decision to continue in the study, they will notify me of them immediately.

INFORMATION ABOUT THE STUDY RESULTS:

The researcher will email me the research findings of the study.

MORE INFORMATION ABOUT THIS STUDY:

If I have any other questions or require more information about the study itself, I may contact the researcher or her supervisor at the numbers mentioned hereinabove.

If I have any questions with regards to the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall,

CONSENT: I, _____, the undersigned, agree to participate in the above research study. The study has been explained to me, I have had the opportunity to ask questions about my involvement and to receive additional details that I wanted to know about the study. I understand that by accepting to participate, I am in no way waiving my right to withdraw from the study at any time.

I have been given a copy of this form.

Participant's name: (Please print) _____

Participant's signature:

_____ Date : _____

I, _____, am interested in collaborating in the project conducted by Shu-Fen Lee of the Faculty of Education at the University of Ottawa. The purpose of the research is to examine the school experiences of university students with hearing impairment.

Written consent of the participants must be obtained whenever a research project is undertaken with human participants. The University of Ottawa has made this type of agreement mandatory out of respect towards the participants, and this does not imply that they may be put at risk.

Consent Form for Professors and Centre for Counselling Services Personnel

Title of the study: Taiwanese University Students with Hearing Impairment: An Investigation of their Experiences and of their Reasons for Persistence in their Studies.

Principal Investigator(s) (Supervisor(s)): Dr. Cheryll Duquette
Associate Professor
Faculty of Education
University of Ottawa

Co-investigator(s) (Student(s)): Shu-Fen Lee
Faculty of Education
University of Ottawa

INVITATION TO PARTICIPATE:

This research project is a doctoral thesis conducted by Shu-Fen Lee of the Faculty of Education, University of Ottawa, Canada..

I am invited to participate in the abovementioned research study conducted by Ms Lee, doctoral student, who is being supervised by Cheryll Duquette, PhD, both of the Faculty of Education, University of Ottawa, Canada.

PURPOSE OF THE STUDY:

I understand that the purpose of this study is to explore the experiences of university students with hearing impairment, to see how they have overcome obstacles and persisted in their studies. From this research the researcher wishes to learn what factors influence success at higher education. This study may then be used as a reference guide for policy makers, teachers and parents who work with school age students with hearing

impairment.

ELIGIBILITY:

To be able to participate in this study, I must be a full time employee of the university, with a minimum of 2 years experience with students with hearing impairment.

PARTICIPATION:

I understand that I will be asked to participate in one 60 minute interview, at a convenient time for me on the campus, conducted by Ms. Lee. The interview will be audiotaped and transcribed. The purpose of this interview is to discuss my experience teaching or working with students with hearing impairment. After the interview, I will be given a copy of the transcript so that I may review it for accuracy.

RISKS:

The researchers have assured me that I am free to refuse to answer any questions that I do not wish to answer.

I may request to have a short break in the interview process at any time.

BENEFITS:

I will not benefit directly from my participation in this research. However, this research will benefit potential students in higher education, as this project hopes to increase awareness of the factors leading to successful experiences of students with hearing impairment in universities.

CONFIDENTIALITY AND CONSERVATION OF THE DATA:

I have received assurance from the researcher that the information gathered from me will be used solely for the purposes of this research. In Taiwan, the tape-recording and

transcript will be kept in a security box in a local bank, and in Ottawa they will be kept in a locked filing cabinet in the office of Dr. Cheryll Duquette at the University of Ottawa for a period of 5 years post-publication, after which they will be destroyed. The only people who will have access to the data are Dr. Duquette and Ms. Lee. Electronic data will be password protected and stored only on Ms. Lee's computer for 5 years post-publication.

ANONYMITY:

I will remain anonymous in the study, and Ms. Lee will give me an English name (a pseudonym) for reference purposes.

In publications resulting from the study,

I agree to be quoted. yes _____ no _____.

I agree that my words be used in reports and publications, but I wish to remain anonymous. yes _____ no _____.

VOLUNTARY PARTICIPATION:

I am under no obligation to participate and if I choose to participate, I may withdraw from the study at any time, for any reason, without consequence. If I choose to withdraw, all data gathered until the time of withdrawal will be destroyed.

NEW FINDINGS:

In the event that the researcher discovers new findings that might influence my decision to continue in the study, they will notify me of them immediately.

INFORMATION ABOUT THE STUDY RESULTS:

The researcher will email me the research findings of the study.

MORE INFORMATION ABOUT THIS STUDY:

If I have any other questions or require more information about the study itself, I may contact the researcher or her supervisor at the numbers mentioned hereinabove.

If I have any questions with regards to the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa.

CONSENT: I, _____, the undersigned, agree to participate in the above research study. The study has been explained to me, I have had the opportunity to ask questions about my involvement and to receive additional details that I wanted to know about the study. I understand that by accepting to participate, I am in no way waiving my right to withdraw from the study at any time.

I have been given a copy of this form.

Participant's name: (Please print) _____

Participant's signature:

_____ Date : _____

I, _____, am interested in collaborating in the project conducted by Shu-Fen Lee of the Faculty of Education at the University of Ottawa. The purpose of the research is to examine the school experiences of university students with hearing impairment.

Written consent of the participants must be obtained whenever a research project is undertaken with human participants. The University of Ottawa has made this type of agreement mandatory out of respect towards the participants, and this does not imply that they may be put at risk.

Consent form in Chinese

聽障學生同意書

研究題目：調查台灣大學聽障生的持續完成大學課業原因和求學經驗

主研究者（指導教授）：Dr. Cheryll Duquette

Associate Professor (副教授)

渥太華大學教育學系

40

共同研究者（學生）

渥太華大學教育學系

邀請參加

加拿大渥太華大學教育學系李(張)淑芬博士論文研究

我被邀請參加李博士研究生上述的研究並由加拿大渥太華大學教育學系 Cheryll Duquette 教授指導。

研究目的

我瞭解這研究的目的是探討聽障大學生如何克服障礙堅持完成學業。研究者希望從這研究中知道甚麼原因影響能成功完成大學教育。這研究或許可以給教育決策者和從事聽障教學的教師和有聽障孩子家長參考。

資格

我必須是註冊在台灣的大學而且是聽障生才能參與這研究。

參與

我瞭解我將被要求參與每次 90 分鐘 3 次個人訪談，大約相隔 3 至 7 天時間，在校內或校外以我方便的時間，由李女士訪談並錄音和轉述成文字。這些訪談的目的是討論我從小學到大學的求學經驗，訪談結束後我會收到一份關於我的人物側寫以便我可以核對正確性。

在個人訪談結束後我將被要求和參與這研究其他聽障生參加約 60-90 分鐘的團體座談在座談會，我將和其他聽障生討論分享就讀大學的經驗，團體座談的內容將會錄音和轉述成文字。

李女士也會週觀察我在學校和別人互動的社交活動校園生活,一週 1 或 2 小時持續 4 週,觀察不需要錄音和錄影,觀察將幫助研究者瞭解我的大學生活社交活動.

風險

研究者確信我可以自由的拒絕任何我不想回答的問題,我可以要求再訪談的任何時間要求短暫的休息.

益處

作為這研究的受訪者我將不會直接受益,然而這研究將會給未來在高等教育的學生受惠,也因這研究希望能增加喚起注意聽障大學生成功求學經驗因素.

研究資料的保密和存放

我已從研究者確信從我這裡收集的資料只作為這研究的目的,研究者會要求在團體座談時其他的研究對象對於我說的話保密但是不敢保證他們會遵守,在台灣訪談的錄音帶和轉述文字放在當地銀行的保險箱,在渥太華會存放在渥太華大學 Cheryl Duquette 教授的辦公室的櫃子五年的時間然後銷毀,只有李女士和 Cheryl Duquette 教授會接觸到這些資料,同時研究出版後也存在李女士的個人電腦五年的時間.

匿名

在這研究裏我會使用匿名,李女士會給我一個英文名字當作參考,在團體座談時我的匿名不能保證其他研究對象知道.

關於這研究出版

我同意我說的話直接被引用 是 否

我同意轉述我的話被用在報導和出版上,但是我希望使用匿名 是_____ 否_____

報酬

我會在每次訪談時收到由李女士給的包含交通費的報酬加幣\$20 (台幣 \$500),三次訪談共\$60 (台幣 \$1500), 團體座談後安排自助餐 漏掉的訪談不給報酬,如果我決定撤消參加,將不會影響先前參與所領的報酬.

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新發現

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我已收一份影印的同意書

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參與受訪者簽名 _____ 日期 _____

我, _____, 有興趣參與由渥太華大學教育學系李女士執行探討聽障大學生求學經驗的研究

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聽障學生學伴同意書

研究題目：調查台灣大學聽障生的持續完成大學課業原因和求學經驗

主研究者（指導教授）：Dr. Cheryll Duquette
Associate Professor (副教授)

共同研究者（學生） 李(張)淑芬
渥太華大學教育學系

邀請參加

加拿大渥太華大學教育學系李(張)淑芬博士論文研究

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資格

我必須是註冊在台灣的大學聽障的學伴生才能參與這研究。

參與

我瞭解我將被要求參與 60 分鐘個人訪談，在校內或校外以我方便的時間，由李女士訪談並錄音和轉述成文字。這些訪談的目的是討論在大學裏幫忙聽障生的經驗，訪談結束後我將會收到一份訪談轉述成文字的副本，以便可以核對正確性。

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受惠,也因這研究希望能增加喚起注意聽障大學生成功求學經驗因素.

研究資料的保密和存放

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教師和行政人員同意書

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李(張)淑芬

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Appendix F

Questions for the Semi-structured Interview with HI students

Interview 1: Reflections on pre-university educational experiences, family background, skills and abilities, intention and institutional and goal commitment.

1. Tell me about you and your family. What is your age? What year are you in your studies? How many siblings do you have? What are your parents' occupations?
2. Tell me about your hearing loss. What type is it? Was it inherited or accidental? When was it detected? When were you fitted with hearing aids? How do they work? Do you use them? If not, why not?
3. How do you communicate? How do you feel about this method of communication?
4. How do you feel about your hearing loss?
5. Tell me about your experiences in primary school. Junior high. High school.
6. How was your academic performance in high school? What type of courses did you take (academic, university-bound)? Did the courses prepare you for university? Do you have speech or reading difficulties? If so, what are they and how do you cope? Did the courses prepare you for university? Did you have any extra assistance in school? Did you feel comfortable asking the teacher or peers to explain things in more detail?
7. Did you have many friends at school? If so, how many? How often did you see them? What sorts of things did you do with them?
8. Were you involved in any sports, clubs, or other extracurricular activities?
9. Did you have hearing and non-hearing friends? Did you feel socially connected to your peers?
10. When did you plan to attend university?

11. Was this decision influenced by anyone? If yes, by whom? Did your parents expect you to go to university?

12. What are you studying? What are your post-university plans? Do your parents have career expectations for you?

Interview 2: Reflections on institutional experiences, personal and normative integration and student effort.

1. How has your academic performance been while in university? Are you satisfied with it?
2. Do you think you have learned much? If so, what types of things have you learned? (academic, things about yourself, how to study, how to advocate for yourself)
3. Have you sought the help of professors? For what type of help and how often? Was it useful? Do you feel comfortable doing this?
4. Have you sought the help of your peer-tutor? For what type of help and how often? Was it useful? Do you feel comfortable doing this?
5. Have you sought help from the Centre for Counselling Services? For what type of help and how often? Was it useful? Do you feel comfortable doing this?
6. Have professors or your peer-tutor approached you to offer help? If so, describe the occasions. Did you accept their offer? Why or if not, why not?
7. Did the first-year special classes help you? If so, how? If not, why not?
8. Have you become involved in extracurricular activities while attending university? If so, what? Did you enjoy it? How long did you participate? Why did you quit? Have you made any friends from these activities? Does participating in them help you feel socially connected to your hearing and non-hearing peers?
9. Did you go to any of the activities sponsored by the Centre for Counselling Services?

If so, which ones? Were they enjoyable? If not, why not?

10. Do you have hearing and non-hearing friends? How many? How often do you see them? What types of things do you do with them?
11. How important are your friendships in terms of your decision to complete your course work?
12. Do you put much time and effort into your studies?
13. When you are in class, do you try to get involved, for example by asking questions or participating in discussion groups? Are there study groups outside of class? If so, do you participate in these? If so, are they helpful? If not, why not?
14. Are you satisfied with the quality of the instruction? Are there techniques the professors could use to help you learn better? If so, what are these?
15. Have the out-of-class assignments have been good learning experiences? What have these been? Why, or why are they not, good learning experiences? If yes, what have you learned?
16. Do you talk to professors outside of class? If so, what do you talk about?
17. At university, what is your top priority? (getting good marks, learning, socializing?)
18. Do you ever feel stressed at university? What causes stress? How do you deal with it?
19. Have you ever thought of quitting? If yes, tell me about a time when you felt like dropping out. Why did you persist?

Interview 3: Reflections on outcomes, goal commitments, persistence and external commitments.

1. Do you feel that you were prepared for the academic requirements of university? If yes, why? If no, why not? What would have prepared you?
2. Are you satisfied with your marks? If yes, why? If no, why not? What could you do to

improve them? What could others do to help you?

3. Do you feel you have the support of your family? Is it support or pressure to do well?

How do you feel about this?

4. How socially connected to your hearing and non-hearing peers do you feel? What could you do to feel more connected? What could they do?

5. Do you feel connected to your professors? Why or why not? What could the professor do to help you feel more connected?

6. Do you ever feel isolated from non-hearing peers? From hearing peers? From your family?

7. Who provides you with emotional support? How important is this in terms of keeping you in school?

8. How important is it for you to graduate?

9. What are the prospects for getting a job in the career you have chosen?

10. If you had the chance to choose this university again, would you?

11. What has been the most important thing keeping you in university?

*Questions for the Semi-structured Interview with the Centre for Counselling Services**Personnel*

1. How many students with HI seek help at the Centre for Counselling Services?
2. Are they mostly first-year or more senior students?
3. In what areas do they need help?
4. What kinds of things would you do in a session with a student with HI?
5. How do you arrange a time to meet?
6. Do they seem to need a lot of help?
7. Do they get good marks in their courses? Does the assistance help them get good marks?
8. Do they seem to like studying at this university?
9. Do you think you are providing enough assistance for them? If not, what more could be done?

Questions for the Semi-structured Interview with Hearing Partners

1. Why did you decide to be a hearing partner?
2. How often do you meet with your student who has HI? How do you arrange to meet?
3. When you meet, what do you do with your partner? How do you help him or her? In what subjects does he or she need the most help?
4. Does your partner get good marks in his or her courses? Does the assistance seem to help?
5. Does he or she like studying at this university?
6. Do you think you are providing enough assistance for your partner? If not, what more could be done?

Questions for the Semi-structured Interview with Professors

1. For how many years have you had students with HI enrolled in your course?
2. Have you had any training in accommodating students with HI in university-level courses? If so, was it helpful? If not, what type of training would you like?
3. What types of things do you do when you teach to help them understand the content of your lectures?
4. Do you give students with HI accommodations, such as submitting assignments late? How do you feel about marking accommodations for students with disabilities? Do you find meeting their needs burdensome?
5. Generally, how do the students with HI do in your course?

Appendix G

Areas of Focus for Observations

1. The physical setting
2. The participants
3. Activities and interactions
 - students with HI interacting with hearing peers
 - students with HI interacting with professors
4. Conversation
5. Subtle factors:
 - Informal and unplanned activities
 - nonverbal communication

Appendix H

Focus Group Interview Questions

1. Do you consider that your pre-university learning experience has helped you study at university?
2. In pre-university schooling, what subjects should be emphasized which would be helpful for university?
3. What has been the greatest difficulty for you as students with HI at university and how have you overcome it?
4. How have you made friends with HI and hearing students at university? Have you had any difficulty in making friends?
5. Do you think that the ratio of students with HI to hearing students could influence your choice of university?
6. Do you have any teaching suggestions for the professors?
7. How important is the learning partner support system for students with HI at university?
8. Is the Centre for Counselling Services helpful for students with HI, and how could its services be improved?
9. How has studying at university made you feel about yourselves?
10. What is the most important reason for students with HI to study at university?

Appendix I

Summary of Individual Profiles

Summary of Annie's Profile

	Annie
Individual characteristics (family background, individual ability, pre-university experience, motivation to enter university)	Hearing family. Uses both oral and sign communication and oral is quite good; wears hearing aids. Educated in a regular class, special class and school for deaf students. Won a scholarship and wanted learn more.
Academic integration (grade performance; interaction with faculty)	Academic average 75%-85%, with some failed courses; good at art subjects. Seldom interacted with faculty
Social integration (peer interaction with HI & Hearing students; extracurricular activities)	All friends are students with HI; did not like interacting with hearing students. Only joined two clubs in one semester.
Support services (special classes; learning partner; the Centre for Counselling Services)	Found special classes helpful. Had three learning partners but felt they were not helpful; seldom asked for help from the Centre for Counselling Services.
Quality of effort	Skipped classes; finished work, but only studied hard at the beginning. Overcame some difficulties and stresses.
Goal commitment Institutional commitment Persistence	Felt university degree is important to find a good job. Liked this university, which was her only choice. Strong persistence and never considered dropping out.

Summary of Helen's Profile

	Helen
Individual characteristic (family background; individual ability; pre-university experience, motivation to enter university)	Hearing parents but brother is also HI; parents had university degree; close relationship with her mother. Cochlear implant in one ear; oral as main communication. Pre-kindergarten speech training, educated in regular school with resource room; good at art. Influenced by her brother and also encouraged by her parents and teachers.
Academic integration (grade performance; interaction with faculty)	Academic average 78%-81% and improved year by year. Sometimes asked professors questions through learning partner or on her own.
Social integration (peer interaction with HI & Hearing students; extracurricular activities)	Only socialized with other students with HI; felt distanced from hearing students. Never attended any extracurricular activities.
Support services (special classes; learning partner; the Centre for Counselling Services)	Found the special English class was easier than Chinese. Felt learning partner was helpful in her first two years, and was independent in her third year; seldom asked for help from the Centre for Counselling Services.
Quality of effort	Spent a lot of time and effort on academic work.
Goal commitment Institutional commitment Persistence	Felt university degree is important to get a good job Liked and was satisfied with this university, but the department was her second choice. Strong persistence and never considered dropping out

Summary of Jenny's Profile

	Jenny
Individual characteristics (family background; individual ability; pre-university experience, motivation to enter university)	Hearing family; tense relationship with her mother who pushed her in her studies. Uses sign as main communication; wears hearing aids. Educated in a school for deaf students and had good academic performance Mother forced her to enter university.
Academic integration (grade performance; interaction with faculty)	Academic average around 80%. Asked professors more questions in art than in other subjects
Social integration (peer interaction with HI & Hearing students; extracurricular activities)	Made a few friends with hearing classmates, but most friends were HI. Did not attend any clubs
Support services (special classes; learning partner; the Centre for Counselling Services)	Found special classes helpful. Good relationship with helpful learning partner; seldom asked for help from the Centre for Counselling Services.
Quality of effort	Was nervous about academic work and put in a lot of effort to achieve better marks
Goal commitment Institutional commitment Persistence	Felt university degree is important to get a good job. Liked this university, which was her only choice. Once considered dropping out in the first year due to academic concerns and pressure from mother

Summary of John's Profile

	John
Individual characteristics (family background; individual ability; pre-university experience) Motivation to enter university	Hearing family Uses oral, sign and writing communication, did not wear hearing aid; Educated in a mainstream class in a regular school and school for deaf students; good at art Encouraged and influenced by his best friend in the same class
Academic integration (grade performance; interaction with faculty)	Academic average over 80% Took the initiative in asking professors questions, except in introductory courses
Social integration (peer interaction with HI & Hearing students; extracurricular activities)	Took the initiative in making many hearing friends and seldom interacted with students with HI. Never attended extracurricular activities because he was busy studying
Support services (special classes; learning partner; the Centre for Counselling Services)	Found Chinese, but not English, class helpful. Was satisfied with his learning partner, who was important to him; other than the first year, he seldom attended the Centre for Counselling Services activities and never asked for help
Quality of effort	Put lots time and effort into studying to get a good mark
Goal commitment Institutional commitment Persistence	Felt university degree was important to get a good job Liked this university, which was his only choice Strong persistence and never considered dropping out

Summary of Lily's Profile

	Lily
Individual characteristics (family background; individual ability; pre-university experience, motivation to enter university)	Deafness was inherited; low-income family. Uses sign to communicate; did not wear a hearing aid. Educated in a school for deaf students; good academic performance Encouraged by teachers
Academic integration (grade performance; interaction with faculty)	Academic average around 70%, with some failed courses. Academic performance was not improving over time. Seldom asked professors questions
Social integration (peer interaction with HI & Hearing students; extracurricular activities)	Most friends were students with HI; only interacted superficially with a few classmates. Joined clubs for two years but did not make any friends there
Support services (special classes; learning partner; the Centre for Counselling Services)	Found special classes helpful, but Chinese was harder than English. Learning partner was only helpful in the first two years of university; attended the Centre for Counselling Services activities but seldom asked for help
Quality of effort	Did not feel confident in her learning because her academic performance was not good. Needed to put more effort into studying. Found studying difficult at university
Goal commitment Institutional commitment Persistence	Felt university degree was important to get a job. Liked this university, but it was her last choice. Strong persistence, because she did not want to disappoint her family and teachers.

Summary of Maggie's Profile

	Maggie
Individual characteristics (family background; individual ability; pre-university experience) Motivation to enter university	Hearing family. Sign and writing are her main communication methods. Educated in a school for deaf students; studied hard and had a good academic performance. Wanted to learn a lot and thought campus life would be exciting
Academic integration (grade performance; interaction with faculty)	Academic average 83-5%; only interacted with the professors she liked
Social integration (peer interaction with HI & Hearing students; extracurricular activities)	Spent most time with students with HI on campus, only made a few hearing friends. Joined a club one year but did no make any friends there
Support services (special classes; learning partner; the Centre for Counselling Services)	Found special classes helpful, but preferred to be in a class with hearing students. Learning partner was helpful and they had a close relationship; joined activities but seldom asked for help from the Centre for Counselling Services.
Quality of effort	Did not work as hard as in high school. Found courses difficult even though she put in effort
Goal commitment Institutional commitment Persistence	Felt a university degree was important to find a job Liked this university, but wished she had gone to another university Considered dropping out at in her second year, but her high self-esteem made her persist

Summary of Wendy's Profile

	Wendy
Individual characteristics (family background; individual ability; pre-university experience) Motivation to enter university	Hearing family; uses oral communication; pre-kindergarten speech training; educated in a regular class with a resource room Influenced by parents and sisters
Academic integration (grade performance; Interaction with faculty)	Academic average below 80%, with some failed courses; interacted mostly with professors she liked
Social integration (peer interaction with HI & Hearing students; extracurricular activities)	Interacted mostly with students with HI. Did not join any university clubs or make any hearing friends
Support services (special classes; learning partner; the Centre for Counselling Services)	Considered special classes for only HI students unhelpful. Found her learning partner helpful, but they did not have a close relationship; seldom asked for help from the Centre for Counselling Services.
Quality of effort	Thought she did not have enough art skill and did not work hard. She did not know how to overcome her difficulties
Goal commitment Institutional commitment Persistence	Felt university degree was important to find a good job She wished she had chosen another university with a program that interested her. This department was not her first choice Strong persistence and never considered dropping out

Appendix J

Example of a participant profile in his own words

John's Profile

I am a university student with hearing impairment (HI). Right now I am studying in the fourth year. I was born premature and I had high fever, which damaged my hearing. My family, my parents and one brother and a sister, can all hear ... I do not wear a hearing aid because it doesn't help much. I usually communicate with people with total communication, including sign language, oral and written methods. I do not feel upset or angry about my hearing loss because I have not been able to hear since birth, so I am used to being a person with hearing impairment.

Primary School Learning Experience

I use to speak and lip-read when I was young and I also wore a hearing aid. My parents forced me to speak and they tried to speak slowly so that I could understand. My mother would slap my hands if I used them to express something. I studied in a mainstream class at primary school. In the mainstream class, we only used speech and lip reading. The teachers did not know sign language. I think that my oral ability was being trained during that time. At primary school, I did not feel it was difficult for me to study any subject, including Chinese and math ... I came third academically in class (there are more than 20 students in my class). I usually went to the library to borrow comic books ... I was able to look at a lot of pictures and read the accompanying stories, so I think that reading comic books improved my Chinese. In primary school, I found that I was not very happy because the class atmosphere was not good. Pupils teased you if you were strange because you could not hear, and sometimes there were fights. I think that the teachers were nice but they did not understand us, because could not communicate well

with students with hearing impairment. My parents paid close attention to my study and learning situation. They punished me when I behaved badly or did not study hard.

Junior High and High School Learning Experience

After I left primary school, I went to a deaf school for 6 years, which included junior high and high school. I did art when I was at primary school and I wanted to continue, so I entered a deaf school which offered art lessons. It was difficult for me to understand sign language in the first year and I practiced it on my own. After one year, I became fluent in sign language. In junior high, my academic achievement was not as good as when I was in primary school. I came fifth academically in class ... My high school academic performance was bad, especially in English. Sometimes I got 20% or even less in tests, but I got good grades in art, so I came first in art when I graduated. I also took part in an art competition and came fourth in the city. I only made one good friend when we were in the same class. She studied very hard and got good marks. She always encouraged me to take the university entrance exam. We cheered each other up and taught each other.

When I was in the second year of high school I made the decision to enter university or college, so I started to prepare all the required subjects, including Chinese, English, history and art. In the summer vacation, I needed to go to school to study in order to take the national entrance test. The teacher did not encourage me because my academic grades were not good and the teacher thought that I would have difficulty passing the entrance exam. My mother encouraged me to study for university but she respected my decision. I decided to try it. It was a surprise for me that I passed the entrance exam and got admission into the university I had as my first choice ... I think that I was able to pass because my art score was high and they counted the art and

academic scores together.

University Learning Experience

I was really curious about this art university because I did not know what a university was like before I came here. I like this university. It is famous for having HI students, but most of the students are normal, which make it very different from deaf schools. I have three high school classmates studying in the same university, but in a different faculty. I have lived in university accommodation for four years. University study is much harder than at deaf school. It is big change in my study life. I find that I learn a lot about art and have come third. Other than study, I have also made many friends and have matured and my outlook has expanded. I am also much happier than I was in the deaf school.

I think that I study hard. I spend four hours a day studying (including doing assignments). I am the only HI student in my faculty, so my classmates and professors help me, especially those in the faculty, who teach the general methodology required for the assignments. If I have a question, I either ask my learning partner (who is trained and paid by the government.) to come with me or I go by myself and use paper and pen to communicate with the professor.

I never ask professors questions in the large introductory courses because all the professors from other faculties would walk out as soon as the class ended. They do not pay any attention to me, probably because they do not know that I am a student with hearing impairment. The professors do not change their teaching methods in the class when there is a student with hearing impairment. They always speak and only sometimes use overheads, and I feel that overheads are better for HI students because they can see the information. If I have a question in class, my learning partner asks the question for me.

If the class divides into group discussion, my learning partner helps me join the discussion.

First Year Learning Experience

My first year at university was a big challenge for me. I relied heavily on my learning partner, who took the same courses as I did and always sat beside me. He wrote down the important points made by the professor and gave them to me to read. If I did not understand, I would ask him and he would write it all down more simply. He also would make sure I knew important announcements, such as when assignments were due, and what was required in them, and he let me know of school activities.

My academic performance in the first year was not good because I did not know the subject well, and had problems writing essays, and there were a lot of essay assignments (the deaf school never taught us how to write). I did not know how to write and whether I was doing the right thing. My learning partner taught me how to write and took me to the library and told me what books I needed to read to prepare for the essay. Sometimes I wrote half of the assignment and gave to him and he finished it for me, so he helped me a lot. He would then show me what he had done before I handed it in to professor. This was because the professor did not understand my essays, so the marks were low and I needed my learning partner to edit my work. I was so lucky to meet such a good learning partner. I know some students' learning partners are not as good as my learning partner.

The first year was difficult for me because I was not familiar with campus life and knew very little about university life, including learning. It took time to understand how to study. I felt under stress and could not sleep at night and I needed to resolve it myself, because my learning partner could not help with everything. In the first year, special classes in Chinese and English were offered for all HI students. The teachers came from

deaf schools and knew sign language. I think the English course was no help because the teaching style was the same as in my junior high school. The Chinese course was helpful, as the teacher taught at a university student level.

The Centre for Counselling Services helps students with hearing impairment. In the first year, the center offers many activities for HI students and learning partners. I often attended activities in the first year. The Centre for Counselling Services also offers individual counseling and help for students. I never went there to ask for help for personal matters, because I think as a university student I am old enough to resolve it by myself. If I have academic problems, I ask my learning partner for help. I have never attended extracurricular activities because I am busy studying. My learning partner sometimes took me to some fun activities.

Second Year Learning Experiences

In the second year, some of my learning partner's courses were different from mine, but he still helped me when we were in the same course. I had problems when he was not in the same class with me, but I seldom asked other classmates to help me because they haven't been trained in how to help students with hearing impairment, so I usually tried to study by myself, going to the library to find books or writing down topic and searching on the internet. Sometimes the students in my class did not notice that I am a student with hearing impairment. When things got difficult and I had a big problem in the course, I would ask my learning partner to help me even if he was not in that course. He would ask other hearing students to help me.

I remember something serious happened in one class. All the students were divided into two groups. I could not find my learning partner, so I felt anxious and nervous. I did not know what was happening. My classmates were all speaking and paid no attention to

me. I do not know why we were dividing into groups and what each group was supposed to do. The teacher asked me which group I was in, but I did not know what was happening. One classmate eventually helped me and wrote the instructions on the blackboard. I felt so upset and helpless in that time.

In my second year, I still did not attend extracurricular activities. I only attend activities which the center for counseling services offered, and not every time. I usually chatted and ate with other students with hearing impairment there.

Third and Fourth Year Learning Experience

I got used to studying at university and I still study hard, so I maintain an academic average of 80% or more in each semester and I am in tenth in my class. The normal students are surprised that an HI student can get a good grade. In my third year, I did not rely on my learning partner as much as before. I felt more confident studying. If I was not in the same class as my learning partner, we still used MSN to interact each other ... I still need my learning partner to check my essays but he only tells me which part needs change or additional material ... After my learning partner has read and made suggestions, I rewrite it and give it back to him to reread and hand it in to professor. Sometimes I do not ask him to reread it. I get my good marks from studying hard. If you pay careful attention in class and do not doze off, then you get 60% because the professors are smart and know who is performing well in class. Another thing is not to skip class because professors always know who seldom comes to class. In fact, it is not difficult to study in university if you study hard. If you fail some courses or are kicked out of university, that means you did not study hard.

I've never attended any extracurricular activities or clubs in my four years of university life. Someone told me that you can make friends when you take up sports, but I

prefer to make friends among my classmates.

Learning Partner

My learning partner has been the important person helping me study at university. He works very hard for me. He is intelligent, smart and his thinking is acute and energetic. He behaves like a professional teacher. He is very academic and has been accepted into graduate school. If I had not had this learning partner to help me, my grades would be very bad ... He has really helped and guided me in these four years so I think that we do not relate to each other as friends, but as teacher and student. I know some students with hearing impairment study at other universities which have no learning partner system, but only guidance centers to help HI students. Students need to ask for help. My friend does not want to ask for help from the guidance center so his academic grades are very bad. He failed three courses ...

Making Friends

I like to make friends, especially with normal students. I have 23 normal friends at university, and they include male and female. We get together, go out for lunch, discuss courses and chat on MSN. I do not want to make friends with HI student in the university because normal students have better thinking and I am on the same level as them. I like their competitive thinking, and they make me improve. I do not make friends with students with hearing impairment in the university because sometimes they are self-centered.

When I meet normal classmates on campus, I just say hello to them if they are busy, but if they have time, I stop to chat with them, using pen and paper to communicate with them. I know that they are all like me because I have fun with them and make jokes using sign language. They do not know sign language so I make them laugh. Sometimes I teach

them sign language, and they teach me to speak. I take the initiative in talking to them because that makes normal students feel you are kind and generous. If you do not take the initiative normal students do not pay attention to you. There are some HI students from my high school here, but in a different faculty and we seldom meet on campus and seldom interact. My thinking has changed a lot and we talk only about general things when we will meet in the HI activities. My best HI friend is my former high school classmate and she and I study at the same university but in a different faculty. Although she is a HI student, she is different from the other HI students because she has confidence, determination, studies hard and does not give up, so she is very successful.

Efforts and Stresses

I spend at least four hours studying. When I saw normal students studying hard and doing well they became role models for me. My learning partner is my most important role model. I think that I did not study hard in high school compared to how I study at university. There is not much competition in high school so I think that I did not study hard. Another thing that encouraged me is scholarships. The government encourages students with disabilities by offering scholarships. If my academic average is over 80 in one semester, I get 40000 NT (\$1300 CN), so I study hard and get to keep my scholarship every semester, so I can concentrate on studying and do not need to find a part time job. My classmates tell me that I could get higher marks and more money, but I think that I try my best and that's enough for me because sometimes I get tired.

I feel stressed studying at university, not only in essay-writing, but also in sculpture assignments. In written assignments, my learning partner helps me a lot, but he cannot help me with my sculpture. If I'm under stress, I go out and this helps me to feel better. I seldom talk to others about my stress, even my family and learning partner because I

think I am an adult and I need to think about it by myself.

Although I have stress and difficulties studying at university, I don't think that I will ever give up my studies because I think it would be a shame for me to drop out of university. I tell myself that I need to endure and overcome these difficulties and I need to study hard until I finish university. My academic performance improves year by year.

I believe that I need to get a university degree to get a good job, and think that it would be an honor for me to get a degree. An HI student is the same as any normal student and needs to study hard. We must not feel ashamed to be HI students, as we need to study as hard as normal students.

I chose and like this university because it is famous among all students with hearing impairment. I know this university has long history in accepting HI students and more HI students studying here than anywhere else. I am so lucky to be at the university which was my first choice. As there are more HI students here, they can help each other. I would choose this university again because I really like it here. If there were only HI students here, it would not be good because all HI students' thinking is the same and there is no competition and they cannot improve. When there is a mix of HI and normal students, HI students will improve and change their thinking because normal students think differently, with a wider outlook.

Conclusion

The people who have influenced and helped in my school career include my good high school friend who encouraged and competed with me, my university learning partner who helped and guided me, and my family.

I think that my three important sources of support at university have been: my high school friend, who encourages me keep studying and learning; my own efforts; and the

encouragement from my parents.

I am very satisfied with what I have learnt at university and with my own efforts in making friends and getting good grades. The most important things I have learned have been academic, but I have also matured and learned to promote myself. I think that I am a successful student with hearing impairment.

When I graduate, I do not want to find a job immediately because I think that I will take a computer design vocational training course for one year and then take an exam and get a license. I have found that there are many jobs requiring computer design.